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In Two Sections—Section One

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With stale returns eliminated--restriction on delivery and compulsory single wrappers, "freshness" takes on new importance. But housewives still buy on the "pinch-test" basis as a check for freshness.

You must build a loaf that will not stale quickly. A loaf that will have greater shelf life.

This and other war-time factors makes flour selection more important than ever before. Your flour must give you a loaf with maximum shelf life.

International "Bakery-Proved" Flours are milled to do a war-time production job. Carefully selected wheat, rigid milling control and continuous test baking insure top-notch production and loaf-keeping quality. International Flours hold your customers even though bread reaches the family table more than a day after baking.

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INTERNATIONAL MILLING COMPANY – Minneapolis

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It was an AMERICAN who said

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JOHN PAUL JONES, commanding the American man-o'-war *Bon Homme Richard* during the Revolution, boldly plunged his ship into battle against the greatly superior *Serapis.* To offset the enemy's advantage in guns, Jones ran in close and actually lashed his ship to the larger vessel. When the enemy commander, mistaking the purpose of this daring move, asked if the American ship was surrendering, Jones cried, "I have just begun to fight!" Three and a half hours later, the enemy surrendered to the man who refused to be beaten... That defiant, resolute courage is an American heritage. It is one reason why this nation won't be beaten in the present war!

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A SLING FULL OF BAGS on an errand of mercy—typical of the American spirit that is going to the aid of war-stricken peoples in many countries.

The Chase Bag Company is playing a significant part in this glorious work—a task that is requiring many millions of bags for the safe transport of foodstuffs under the most trying conditions—conditions that demand, in many cases, an entirely new type of container to protect against moisture, salt air and battering seas.

Chase engineers are making good—and 13 Chase factories are filling the ever increasing demands, not only from the government but from the home front as well.

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Here, in the very head of the Kansas Hard Winter Wheat Districts, are located four of this company's 27 flour mills. Aided by a score of our own elevators, they select the choicest wheat and produce the fine, high protein, hard winter wheat patents that are recognized by bakers for economy, strength, and customer-appeal in the finished bakery product. ★ Get in touch with any of these mills. Behind their unqualified guarantee of satisfaction is the reputation of this company, which has faithfully served the Bakers of America since 1883.

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PAY A TRIFLE MORE— —AND GET A GREAT DEAL MORE

Big Seven Performance Flour

is doing a war-time job for many of the leaders in the baking industry, because these bakers know that the results in the bake-shop offset its small additional cost. . . . Big Seven Performance Flour proves its value in economy of shop performance, in more loaves to the barrel, in bread flavor and taste that help bakers to win a bigger share of the increasing bread business.

Make Sure that You Have a Dependable Flour Source for Your Future Needs

KANSAS FLOUR MILLS COMPANY

(Trade Name of Flour Mills of America, Inc.)

KANSAS CITY, MISSOURI

MILLING—FOR THE DURATION AND AFTER

By Elmer W. Reed

WHEN I realize that I am talking to a group of men who more than any other group are going to carry the responsibility of success or failure for their companies in the war and postwar periods, it gives me a feeling of humility, a definite feeling of apprehension, if you would call it that, in attempting to say anything to you that would be of any particular value in the trying times which you are now experiencing and which most assuredly lie ahead of you. Frankly, I am not going to try to answer your questions. Many of the questions that are in your minds are just as big and just as compelling in my own mind and that of my company, and we are confused and fumbling for the answers the same as most of you. For many of those questions there are no present answers. The answer must be a composite of individual thinking on the part of unrelated groups, and this thinking in turn will be dictated by developments from day to day and the necessities of the situations that face us as we go further into the war effort.

From the agencies set up in connection with the war activity both before and after Pearl Harbor we have thinking to control substantially every activity in our national life that has any direct or indirect relationship to preparation and prosecution of the war. Let me say in that connection that we may differ in our thinking as to the wisdom of many of the programs undertaken, many of the controls attempted, and many of the means used to attempt to gain the desirable ends, but I think we will all agree that throughout the various agencies involved there are many sincere, conscientious, hard-working and intelligent people who are working their hearts out, in many instances attempting to do the impossible.

It has been my privilege to have rather close contact with just about every Washington agency that touches our industry. I will not attempt to tell you that I have not been irritated beyond expression many times by the wheels within wheels that, for this administration at least, are considered necessary in the handling of our national government. It would not be a fair statement, however, if I did not add that so far as our industry is concerned our relationship with the government has been, I consider, very fine indeed, and that those individuals in the government with whom we come in contact have been most open-minded, most considerate, most understanding in almost all of our problems and have shown a willingness and a desire to co-operate just as far as they can do so.

NO CONCENTRATION

One of the theories expounded in the early days was concentration of capacity. They look at milling statistics and see that the milling industry is operating 60-65-70% of capacity. Facing shortage of power, shortage of labor, shortage of transportation, to one not in the milling industry it is perfectly natural to ask why can we not concentrate this production and make substantial savings in those three things, as well as substantial savings in costs due to the increased volume for those units that are operating?

That thinking had progressed to a considerable extent at the time the committee of the milling industry first actively came into the picture in connection with it. It had progressed to the point where several specific points were named as being places where this concentration should be put into effect to

(Continued on page 18.)

EDITOR'S NOTE.—*This article by Mr. Reed comprises a portion of the text of an address prepared by him for the annual meeting of the Association of Operative Millers, which is in session this week in Kansas City, Mo. Mr. Reed is vice president, general manager and treasurer of the Shellabarger Mill & Elevator Co., Salina, Kansas.*

Looking for something new to say about your self-rising flour? If you're using V-90, then here's a honey of a story! Just show Mrs. Housewife how she can get a dozen more biscuits from a pound of your flour.

Here's the way it's done: When a V-90 biscuit dough is rolled thin (¼") so as to give a biscuit of average height . . . instead of those tall biscuits some folks like . . . a dozen more biscuits can be baked per pound of flour. Furthermore, the V-90 biscuits are 33% lighter by actual weight. Results from a series of laboratory bakes are averaged in the table below.

Results of Laboratory Bakes	Ordinary Phosphate	V-90
Weight of self-rising flour	1 lb.	1 lb.
Thickness of dough	⅜"	¼"
Weight per biscuit	0.61 oz.	0.45 oz.
Height of six biscuits	6.5"	6.4"
Calculated total biscuits per pound of flour	38.6	51

Look at the figures! 39 biscuits from a pound of ordinary self-rising flour . . . 51 biscuits from a pound of V-90 self-rising flour . . . an average of a dozen more biscuits baked from a pound of your flour! Size of the biscuits baked from each type of flour is practically identical . . . just compare the height of six of them. Note, too, the striking difference in the weight per biscuit. Each V-90 biscuit is just about one-third lighter!

What housewife could resist a story like this about your V-90 self-rising flour?

V-90 THE CRYSTAL WITH A BAKEBOAT

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ARMY E NAVY

...the slow-acting phosphate that speeds up self-rising flour sales

Every slice of every loaf displays the quality baked into it. And the flour you use is the most important ingredient controlling that quality, especially with present formulas restricted in sugar, shortening and milk.

When you use Commander-Larabee flours, those slices just have to be of brighter, cleaner color, with finer grain and texture, and a desirably wheaty flavor of well developed fermentation.

Whatever type or kind of loaf you market, you'll find the right Commander-Larabee flour specially milled for that requirement. The milling skill, expert wheat selection and scientific control of every step in their production guarantee the uniform high quality of Commander-Larabee flours that assure you better bread.

Use Commander-Larabee flours—specially milled for bakers—in all your breads—so every slice will tell its own story of fine appearance, desirable taste and good nutrition to all who see it.

COMMANDER-LARABEE ARE SPECIALISTS IN BAKERS FLOURS

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I-H

FLOURS

This is just as important as buying war bonds and even more fun.

The nation wants to increase consumption of bread and all cereal foods not less than 25 per cent in order to save foods that are scarce.

This means selling more flour.

And to sell more flour means that you must sell better flour.

"I-H" Will Supply the "Quality Power" to Back Your "Sales Power."

The ISMERT-HINCKE MILLING COMPANY

KANSAS CITY, MISSOURI

Mills at Topeka, Kansas

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

WE SUPPORT WHEAT FLOUR INSTITUTE

Proposed Enrichment Standards Issued

MILLER RECOMMENDATIONS FOLLOWED

Calcium Optional Except in Self-rising Flour—Maximum Limits Set at 25% Over Minimum—June 18 Deadline for Exceptions—Millers Not Expected to File

By EMMET DOUGHERTY

Washington Correspondent of THE NORTHWESTERN MILLER

WASHINGTON, D. C.—Increased levels of enrichment ingredients for enriched flour, enriched bromated flour, enriched self-rising flour and enriched farina in line with millers' recommendations were included in proposed amendments to federal definitions and standards made public by the Federal Security Agency in the June 5 issue of the *Federal Register*.

Following so closely the position taken by witnesses for the Millers National Federation at the hearings held last month, it is not expected that the milling industry will make any exceptions to the government's proposals, although all interested parties have until June 18 to make known their opposition.

No proposals were made for enriched bread standards and definitions, but William Quinlan, Washington representative of the American Bakers Association, said that the enriched flour standards were consistent with the evidence presented by the industry, and that the bakers were now only concerned with the government's action on fixing the maximum limits for bread to take into consideration the higher enriched flour content involved. The proposed bread standards, it is expected, will not be issued by the FSA until after the millers and other interested parties make known their views by June 18.

The government accepted the industry's views that the spread between the minimum and maximum levels should be narrowed, and also agreed with most of the witnesses that calcium should be continued as an optional ingredient in enriched flour rather than a mandatory one. Calcium, however, remains a required ingredient in enriched self-rising flour, as was expected.

The proposed enriched flour definition sets out the following minimum and maximum levels per pound of flour:

	Minimum mg.	Maximum mg.
Thiamin	2.0	2.5
Niacin	16.0	20.0
Iron	13.0	16.5
Riboflavin	1.2	1.5
Calcium (optional)	500	625

Vitamin D remains an optional ingredient at the present levels of 250 USP units as a minimum and 1,000 USP units as a maximum.

The same requirements are set up for enriched bromated flour as for enriched flour.

Identical minimum and maximum levels are proposed for self-rising flour as for enriched flour, except that calcium is made mandatory, with the minimum fixed at 500 mg. and maximum at 1,500 mg. Vitamin D remains as an optional ingredient in self-rising flour.

The minimum and maximum levels per pound of required ingredients in enriched farina are:

	Minimum mg.	Maximum mg.
Thiamin	2.0	4.0
Niacin	16.0	32.0
Iron	24.0	200.0
Riboflavin	1.2	2.4

Vitamin D—3,200 USP units (no maximum).

Calcium is continued as an optional ingredient in enriched farina, and may be added in such quantity that each pound of enriched farina contains not less than 2,000 mg. with no maximum limit set.

—BREAD IS THE STAFF OF LIFE—

NEW WPB CONTROL ON FOOD MACHINERY SET

WPB Integrates Production With Food Program of War Food Administration—Quotas Set Up

WASHINGTON, D. C.—New controls over production and distribution of new and used processing machinery for food were established in War Production Board Order No. L-292. WPB will now integrate production of food processing machinery and equipment with food programs of the War Food Administration to make certain sufficient processing machinery is manufactured to meet food demands.

It provides for quotas on certain types of food processing machinery as need for such quotas develops. If quotas are not set up until Sept. 30, manufacturers may produce the quantity of equipment they produced in the same period of 1942. In the event a manufacturer has produced, at time production quota is set up, as much or more than during first nine months of 1942, he may complete orders now on books rated AA-3 or higher.

Commencing Oct. 1, and for the year ending Sept. 30, 1944, in the absence of any specific production quotas, manufacturers may produce up to 50% of their average yearly production during 1939 to 1941.

Percentage restriction applies only to new equipment. No restrictions are placed on replacement parts.

In addition, order No. L-292 prohibits manufacture of certain items of food processing machinery and equipment considered nonessential.

—BREAD IS THE STAFF OF LIFE—

PANCAKE FLOUR MILLERS MAY APPEAL TO CONGRESS

WASHINGTON, D. C.—Herman Fakler, vice president of the Millers National Federation, has conferred with the chairmen of the small business legislative committees of the House and Senate as to the possibility of the pancake flour manufacturers appearing before these committees to explain their difficulties in obtaining adequate price ceiling relief from the Office of Price Administration.

—BREAD IS THE STAFF OF LIFE—

MNF OPPOSES LEGISLATIVE PROPOSAL IN ALABAMA

Pending in the Alabama legislature is a bill to enact into state law the provisions of the federal food, drug and cosmetic act. Although most of its terms are similar to the federal law, its authors, according to the Millers National Federation, have seen fit to add strange provisions or make objectionable changes to the federal act. The most important of these changes are the registration requirement, and payment of an annual fee, the omission of the provision permitting reasonable variation in package weights and the addition of a "grade labeling" provision. The Millers National Federation urges all members to mobilize local opposition to important variations from the federal requirements.

FIRST NEW WHEAT ARRIVES AT FORT WORTH

FORT WORTH, TEXAS.—The first three cars of new crop wheat arrived at Fort Worth, June 4, and graded as follows: One car from Crowell, No. 1 dark hard, 62.2 lbs, 13.50% protein; one car from Haskell, No. 1 dark hard, 61.7 lbs, 13.90% moisture, 15.90% protein; and one car from Hamlin, sample grade dark hard, heating, 15.10% protein. Movement will not be general until around June 20 and very little business has been consummated so far on new crop wheat. Bids are around the Chicago July option, basis No. 1 hard; old crop No. 1 hard wheat is worth 1½c over, basis delivered Texas common points.

Millfeed Price Support Discontinued

WASHINGTON, D. C.—(Special)—The Commodity Credit Corp. will discontinue the price support program for millfeeds due to the present strong market for this commodity, it was learned June 8. The program was started Jan. 25, 1943, and was designed to help prevent a rise in flour and bread prices and assure the prompt movement of millfeeds into feed channels. When the price of millfeed averaged more than $1.50 ton below the OPA ceilings, the CCC made up the difference. Except for one brief period, there was no need for the subsidy, and in view of the present feed shortage and volume of demand, no prospect of subsidy need is evident.

FDA Buys Nearly Half Million Cwts of Flour For Export

WASHINGTON, D. C.—The government was in the flour market in the Pacific Northwest during the past week for several large purchases. Of greatest importance was the purchase on June 4 of 45,830,400 lbs of Pacific export straights.

Sperry Flour Co. furnished 15,000,000 lbs, f. o. b. Tacoma, at $2.99 and Fisher Flouring Mills Co. supplied 10,830,400 lbs at Seattle at $3.18 and 5,000,000 lbs packed in single bags at Seattle at $3.03.

Columbia River Milling Co., Wilbur, Wash., sold 120,000 lbs of Pacific Blue Stem cutoffs at $2.75.

Announcement to purchase 560,000 lbs of soft wheat flour has been made, with acceptances scheduled for June 12.

★

WASHINGTON, D. C.—Grains and cereal products purchased by FDA during the past week included the following:

Cargill, Inc., supplied at Buffalo, 80,000 lbs of No. 1 feed barley in bulk, at 84c bu.

Leval & Co., New York City, delivered to Buffalo 64,000 lbs in bulk of No. 2 white oats, at 67¾c bu.

★

Midland Flour Milling Co. delivered to Odenton, Md., 60,000 lbs of wheat bran, packed 100 lbs net burlaps, at $44.60 ton.

Quaker Oats Co. delivered to Akron, 1,344,000 lbs of yellow corn meal, packed in 40-inch 2.05 osnaburg or 40-inch 2.50-yard sheeting, at $2.97 cwt, and 896,000 lbs in same packaging, f.o.b. Cedar Rapids, for $2.79 cwt.

50 MILLION BUS MORE FEED WHEAT

WASHINGTON, D. C.—(Special)—Fifty million additional bushels of feed wheat can be sold by the CCC under an amendment to the lend-lease bill adopted June 3 by the Senate. The House agricultural committee had previously reported favorably upon the item. The Senate amendment is expected to be approved by the conference committee shortly, extending necessary authority to the CCC to dispose of the wheat, orders for which already are in.

Miller's Role in Wartime Stressed

OPERATIVES KEY PROGRAM TO NATIONAL CRISIS

Large Attendance at Opening Sessions of Annual Convention in Kansas City—Year's Developments Reviewed

KANSAS CITY, MO.—The miller's responsibility in wartime was emphasized time and again during the opening session of the annual convention of the Association of Operative Millers, on June 8, with every speaker paying tribute to the miller's role and naming flour the basic food that will help win the war and control the peace.

With 299 registrations on the first day of the convention, and a total of 440 by Tuesday noon, indications were that the 1943 meeting would reach nearly 500 by the time it was in full swing. Despite travel difficulties millers were arriving from both coasts and one of the largest representations in history came from the hard spring wheat area. Of the first day's registrants 80 were women, indicating that there would be more than twice as many in attendance as the estimated 50.

Although the absence of heavy machinery was conspicuous in the display hall, the allied trades were well represented.

GREETINGS FROM MANAGEMENT

Greetings from mill management were extended by E. P. Mitchell, president Flour Mills of America, Inc., Kansas City. Mr. Mitchell said:

"It is indeed a pleasure and a privilege to have the opportunity to extend, in behalf of the millers of Kansas City, both operative and mill management, greetings and best wishes to the members of your association and their friends. It is particularly pleasing to me to have this chance, due to the fact that your president, Mr. Grier, is a former associate of mine, and a friend of many years' standing.

"It is my understanding that this is your forty-eighth annual meeting. In my opinion, and I am sure in yours, this meeting is one of the most important in the history of your association. You, in your positions, have, in the past, been confronted with many knotty problems. In the next few months you will have numerous problems facing you that will seriously affect the welfare of both our country and our industry. You will meet them, I am confident, in the splendid manner that you have met industry problems in the past.

"The responsibility of the members of your organization, to say the least, is outstanding in its importance. You have, and will continue to have, the most prominent place in the food industry.

"Flour is processed more economically than any of our other food products. It is the most important item of food being supplied to our boys in the service, at home and abroad. It is our best food and it is doing a fine job for our boys. Food is a very vital factor and will contribute more to the winning of the war than anything else. You have a great responsibility.

"The Association of Operative Millers is the oldest organization of its kind in existence. Its performance has merited the confidence and respect of management. You have elected officers that have been untiring in their efforts to promote the best interests of our industry wherever and whenever possible. May your usual good judgment prevail in this and future meetings so that your splendid service to our country and industry will continue."

In his presidential address, Carl W. Grier reviewed the year's work of the association and pointed to the industry's wartime responsibilities and postwar opportunities. The text of his talk is published on page 5a of Section Two of this issue of THE NORTHWESTERN MILLER (The Milling Production Section).

Every speaker except Carl N. Arnold, who was to lead the day's discussion forum, was able to attend as scheduled, despite industrial and transportation difficulties that threatened to keep many at home.

Elmer W. Reed, Shellabarger Mill & Elevator Co., Salina, Kansas, read a paper on "Milling for Victory," outlining milling problems of the immediate past and forecasting problems of the future. The essential text is published in this issue, beginning on page 6.

Walter Madgwick's technical paper on the effects of varying vapor pressures on the milling process was considered a significant and helpful work. Mr. Madgwick is of the Gillespie Bros. mill in Sidney, Australia. The paper, read by Edgar S. Miller, was based on temperature and vapor pressure readings taken twice hourly in the Gillespie mill for the period of a year, the graph being based on weekly averages. It gave conclusive evidence that as water vapor pressure decreases, milling yield increases, and in the year tested the variance in the amount of wheat needed to produce 200 lbs of flour was as much as 10 lbs due chiefly to the vapor pressure factor.

Mr. Madgwick's paper went on to show the application of this to tempering and how necessary it was to understand the vapor pressure and temperature principles before attempting quick tempering of wheat. He paid tribute to American mills that already have air conditioning and also quick tempering processes. Australia has no mills with controlled humidity.

In the round table discussion, led by George S. O. Smith, Valier & Spies Milling Co., St. Louis, millers were eager to exchange information about bulk storage of flour. With the help of those who already have such units, it was developed that bins should be large to lower friction ratio; pitch on hopper should be 70 degrees; smooth concrete or steel is preferred for interior; chief value of such bins is in packing and blending advantages.

WOMEN'S WORK IN THE MILL

Mary Anderson, speaking on the subject of women in the flour mill, said that the Women's Bureau of the U. S. Department of Labor, of which she is director, would like to see every establishment in the country have one entrance pay rate for the job, no matter whether men or women were hired for it. Where a learning period was necessary women should not come in at any lower rate, she believed, than an inexperienced man.

"Having unequal rates of pay for men and women," said Miss Anderson, "only makes for trouble later on. Men and women are interchangeable now on too many jobs to make this practice tenable. If she is kept on at a lower rate after her training period is over, and her production record compares favorably with the man's she replaced, the employer can be accused of 'exploiting' women."

Miss Anderson reviewed the various positions in a flour mill that seemed to her suitable for women's work, among them the jobs of oiling, sweeping, machine tending, sack cleaning, packing, loading and laboratory testing, and gave a detailed picture of the general employment situation and the rapidly growing requirement of women to replace men. To the 2,500,000 women placed on payrolls in 1942 another 2,000,000 must be added in 1943, she said. The full text of this address will be published in a subsequent issue of this journal.

MINNEAPOLIS DELEGATION

Among those leaving Minneapolis June 7 for Kansas City, to attend the annual convention of the Association of Operative Millers, were Andrew N. Henjum, King Midas Flour Mills; Charles R. Veeck, Eagle Roller Mill Co., New Ulm; J. O. Schneider, Cannon Valley Milling Co., Cannon Falls; Olaf Myckleby, Duluth Universal Milling Co., Duluth, and William A. Howie, the J. K. Howie Co., Minneapolis. Walter H. Tarling, superintendent for the King Midas Flour Mills, left last week for St. Louis, and will attend the convention before returning home.

DRAFT RULES REVISION NEEDED BY FLOUR MILLS, SURVEY SHOWS

Milling Industry Committee Reports to Government Presiding Officer on Survey of Manpower Needs—Asks Listing of 32 Occupations in Mills for Draft Deferment

WASHINGTON, D. C.—(Special)—Citing the critical manpower situation, especially at Buffalo and in the Pacific Northwest, and pointing out that 32 occupations in mills should immediately be listed for deferment in the draft, Frank Allen, Bay State Milling Co., Winona, and William Morris, of General Mills, Inc., Buffalo, representing the manpower task committee of the Flour Milling Industry Food Advisory Committee, on June 7 presented to the government presiding officer, C. S. Kauffman, the results of their manpower survey and urged immediate remedial action to prevent further depletion of workers in mills. The committee urged that preferential treatment in the draft should be extended to practically all flour mill employees if the increased production demanded by the government is to be achieved.

In summary the committee told Mr. Kauffman the results of their survey showed:

That the total number of employees in flour mills is relatively small, less than 25,000 in the entire industry, which in the calendar year 1942 produced approximately 114,000,000 bbls of flour, and this same number of employees is being called upon to produce approximately 136,000,000 bbls in 1943, or an increase of 20%;

That because of depleted manpower, both skilled and unskilled, practically all flour milling plant employees are now essential to this basic food industry;

That flour, bread and feed for livestock and poultry are essentially war products, the same as bullets, airplanes, tanks and ships;

That pirating of labor continues to be very serious due to the lack of understanding by those in authority of the essential character of this industry;

That the list of essential occupations in food processing industries issued by the War Manpower Commission should be amplified to include more flour milling occupations, and that draft boards and the U. S. Employment Service should be more clearly acquainted with the eligibility of deferment of these essential flour milling occupations;

That the serious conditions existing in the two critical areas of the Pacific Northwest and Buffalo, New York, are rapidly spreading to other milling sections, slowing down production because of unavoidable shutdowns due to manpower shortage (A 10% shortage of manpower exists in Buffalo at the present time);

That women have replaced men to the maximum extent possible in the two critical large areas covered by this report, and the industry as a whole is rapidly making similar replacements.

Mr. Kauffman assured the committee that he would immediately lay the millers' appeal before the War Manpower Commission.

Governmental Ties Hit at Ohio Grain Dealers Meeting

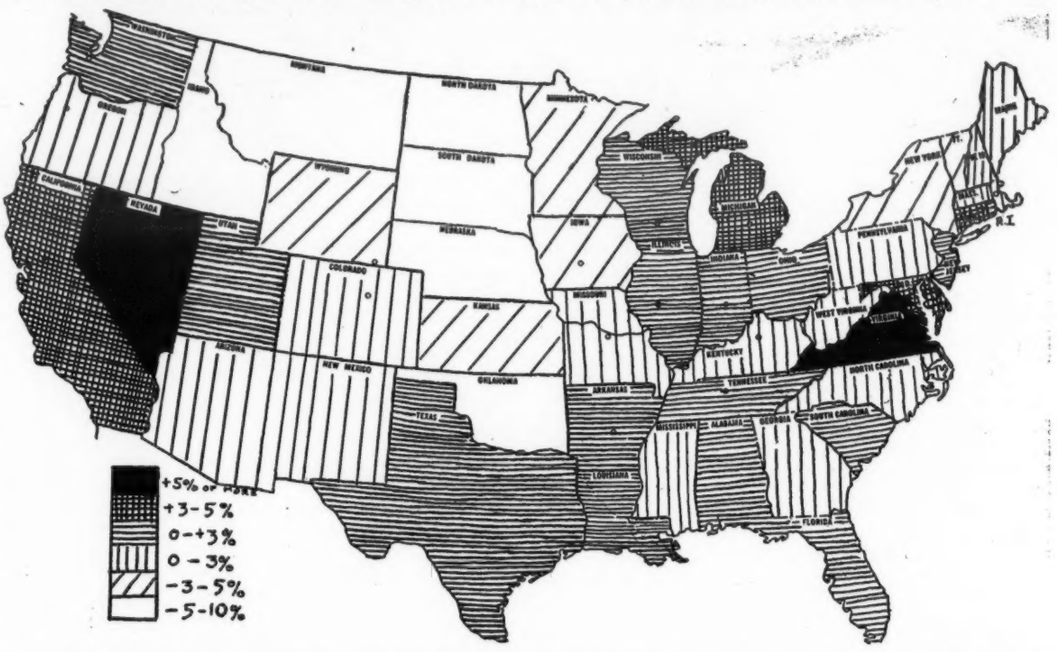
Addressing the sixty-fourth annual convention of the Ohio Grain, Mill and Feed Dealers Association, held at Cincinnati, Ohio, June 7-8, P. R. O'Brien, president of the Chicago Board of Trade, took as his theme the futility of governmental interference and competition in the grain business. He scored the issuance of official directives which are impossible of compliance on account of their complexity.

Mr. O'Brien called attention to the tremendous potential demand for grains and other foodstuffs both during and after the war. "Study the danger signals," he said, "and then try to endorse any philosophy which fails to provide the necessary price incentive for the maximum production of food from every tillable acre of land."

Speaking of "planned economy" and price ceilings, he showed that these fantastic and unworkable theories go back to three centuries after the time of Christ, and all of them miserable failures. While they may work for a time, Mr. O'Brien stated that "sooner or later they have always been followed by periods of stagnation and then chaotic disturbance that almost inevitably brought about great political turnovers." He quoted Thomas Jefferson's famous observation that "were we directed from Washington when to sow and when to reap, we should soon want bread." Carrying out the analogy, he said that if an individual or any small group of persons were to continue to dictate the acreage and the price of wheat, and were they to make a serious mistake in judgment, it could well be fatal to our entire economy.

Paying his respects to the matter of subsidies, Mr. O'Brien said that they are nothing more nor less than a temporary expedient by which unpleasant issues are dodged for the time being. They are, he said, "a means of creating a strong centralized government—the type of government which leans toward dictatorship—and the kind of government which in Axis lands has brought about the most devastating war in the world's history. Subsidies must be paid out of the U. S. treasury, which means borrowing—this means adding enormously to the public debt and hence to the threat of inflation."

CIVILIAN POPULATION SHIFT BY STATES FROM APRIL, 1940, TO MAY, 1942



The map above shows the shifts in civilian population of the United States brought about by the war. The legend at the lower left hand corner shows the percentage changes indicated by the various degrees of shading in the different states. The lighter the state shading the greater the population loss. Since total civilian population declined only .3% in the two-year period, all of the states with no shading or vertical and oblique shading have lost population faster than the national average, while those with the heaviest shading have gained more. Population gains have been confined to about two thirds of the metropolitan counties and to a few scattered rural counties. In the main, these are counties that have had more than average war industry activity. Thus, the greatest gains have been in the middlewestern industrial states, the South and parts of the eastern and western coast. New England and the basically agricultural states of the West Central area have declined the most, together with the older industrial areas of New York and Pennsylvania. The slight decline in total civilian population occurred because the natural increase has been more than offset by the large number of men entering the armed forces. The figures are estimates of the Bureau of the Census.

REVISED FLOUR EXPORT ORDER RETAINS ASSOCIATION SYSTEM

Some Features of BEW Decentralization Plan Now Apply to Shipments to South America—Importers Must Get Together to Determine Needs of Country

WASHINGTON, D. C.—Movement of flour to Latin American buyers will hereafter be definitely and permanently in the hands of the Flour Millers Export Association, under a revised order just issued by the Board of Economic Warfare, which clarifies the board's action of last week reported in these columns.

BEW issued a new order which technically retains flour shipments under the decentralization plan, but actually restores to the exporting millers their right to deal directly with private buyers in the southern republics, William McArthur, general manager of the association, explained. The revised scheme was decided upon in order to remove any commercial advantage which members of the export association may have, and at the same time take care of Canadian shippers and orders which may come to American exporters who are not affiliated with the association.

The plan now provides that representatives of the decentralization scheme in Latin American countries will make known their needs for flour, and determine among themselves how much ocean tonnage would be required to move it. This intelligence will be conveyed to the export association, and similarly to Canadian and nonmember shippers, and tonnage will be allocated on the basis of previous private commercial business done by the three groups. Shipments, of course, will be under general license authorized by BEW.

General Manager McArthur advised member exporters to contact their representatives in Latin American countries to form committees to meet with decentralization plan officers in order that accurate data may be obtained on flour requirements and to otherwise co-operate with the buyers in getting shipping space.

Meanwhile the export association has received space for shipments to Ecuador and Columbia, with some reduction in the tonnage approved for July for all the 15 Pan-American countries to which direct shipments are now authorized.

The Interior Department announced the removal of restrictions on direct shipment of certain food exports to private buyers in Puerto Rico, due to the easing of the shipping situation. FDA, however, retains control over the purchase and shipments of bakery flour, which represents over 90% of the flour volume to the islands. Breakfast foods, family flour and baby foods are included in the list of commodities which commercial shippers may sell direct to private island purchasers.

——BREAD IS THE STAFF OF LIFE——

USE OF "CWT" IN EXPORTS

Because a "cwt" means 112 lbs in the United Kingdom and in some British possessions, an exporting miller has recommended to the Millers National Federation that the new term for flour sales be confined to domestic transactions and that export offers be stated "per 100 lbs" in order to avoid confusion and possible dispute. The Millers National Federation agrees that this seems to be a sound recommendation.

Mexican Flour Mills Required to Produce Whole Wheat Flour

Flour mills in Mexico are required to convert 20% of wheat milled into whole wheat flour, according to an executive decree published and effective May 11, 1943. Under the provisions of this decree, the remaining 80% may be made as before into white flour. Additional provisions of the decree call for all bread manufacturers and bakers to purchase 20% of their normal requirements in the form of whole wheat flour, in order to assure the use of the increased production.

The Ministry of National Economy is empowered to issue regulations covering the various classes of flour to be made, and to fix prices for their sale.

This legislation is intended to serve the dual purpose of reducing the importation of wheat required to supplement national production, and of providing a less expensive, but more nutritious, type of bread. For the past few years, imports of wheat have been subsidized.

——BREAD IS THE STAFF OF LIFE——

U. S. FEED WHEAT PURCHASES

WINNIPEG, MAN.—In answer to a question in the House of Commons, Trade Minister MacKinnon stated the United States Commodity Credit Corporation to date had purchased from Canada 7,500,000 bus of wheat for feeding in the eastern states.

WHITE CORN SUPPLY LIMIT ENDS; INVENTORY RULE STOPS JUNE 30

Futures Contracts Included in Inventory Requirements Regardless of Time—Compliance Form Now Required Only on Request in Amendment of FDO 52

WASHINGTON, D. C.—Exempting white corn for food processing from inventory control, the War Food Administration has amended its FDO No. 52 to limit its application to the period ending June 30. Another major change includes purchases of future contracts and deferred delivery contracts within the 45- and 90-day inventory limitations on manufacturers and feeders, respectively.

The exemption of white corn from the order followed a conference with corn millers, wherein it was pointed out that the limited production area and seasonal marketing of white corn made the restrictions particularly difficult for millers of corn for human food.

The decision to remove all corn from inventory controls after June 30 apparently was based on the belief that the new harvest of small grains will be well under way by that time, which will relieve the pressure for feed supplies, and on the fact that July 1 is the due date for called loans on 1938-41 corn in storage, which amounts to 43,000,000 bus. The latter is expected to result in freer movement of corn from farms.

Until termination of the order, however, the amendment stipulates that all purchases of corn be regarded as part of inventory supplies, including purchases of futures contracts, regardless of the date of such purchases or time of delivery.

FDO 52, issued May 5, limited purchases and deliveries of corn by manufacturers and feed mixers to a 45 days' supply, and by feeders to a 90 days' supply, including stocks on hand. The original order excluded purchases of future contracts and deferred delivery contracts calling for delivery after 45 days. Deliveries on other contracts made prior to April 14, 1943, were also excluded. All of these contracts are now made a part of the specified inventory supplies.

The original order restricted deliveries to dealers to amounts which they were under contract to deliver to manufacturers, feed mixers, feeders and government agencies within 30 days. Deliveries in excess of these amounts were allowed on condition that the corn be resold to the aforementioned parties within 30 days. The revised order tightens this restriction by limiting a dealer's acceptances of delivery to a quantity which, when added to the quantity he already owns, does not exceed the quantity for which he has orders on hand for delivery within 30 days. The revised order also limits purchases, except hedging transactions, by dealer to purchases for delivery within 30 days.

The changes are the outcome of an open meeting at Chicago, May 14, when officials of the War Food Administration discussed the provisions of the order with feeders, processors, feed mixers and dealers.

Originally, the order required all purchasers of corn to furnish sellers a certificate of compliance with the order; the amendment provides that purchasers furnish such a certificate only at the request of sellers who may desire certification as a means of self-protection.

On Critical List . . .

Flour Deliveries Get Second Place in Eastern Gas Setup

WASHINGTON, D. C.—Bakery products and animal and poultry feeds are listed among those given preferential treatment in procuring supplemental allowances of gasoline in the 13-state eastern shortage area. Under the classification made by the Office of Defense Transportation, June 7, these commodities are classified as entitled to an A-1 priority being classed as "very critical," whereas truck deliveries of cereals, flour and meal carry an A-2, or "critical" listing.

In effect, it means that movement of bakery products and feeds will get prior treatment in allotment of gasoline, but there is no guarantee of supply involved in the listing. Those with the highest priority ratings would be allotted gasoline first. The ODT announced that even the most essential carriers will be denied additional gasoline unless they utilize their trucks to the fullest possible extent.

The top listing AA-1 is reserved for the army, navy, maritime commission and lend-lease supplies for export.

It is not enough that the truck operator show that he is engaged in part in taking care of the essential list. He must, in addition, establish that he is devoting the maximum amount of his available facilities to essential war transportation before he is entitled to additional rations. Likewise as to trucks operated by essential industries and services, a showing must be made that all unnecessary trucking has been eliminated.

States in which the restrictions apply are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania (except within corporate limits of Sharon, Sharpsville, Farrell, and Wheatland), Rhode Island, Vermont, Virginia (except within corporate limits of Bristol and Bluefield), District of Columbia, and West Virginia (only Mineral, Grant and Pendleton counties and other counties east of them).

GASOLINE REDUCTION

The 40% gasoline reduction was put into effect by an OPA order requiring that current gasoline "T" coupons must last until July 26, instead of July 1, in the restricted area. Operators will apply for their third quarter rations in mid-July instead of during the last two weeks of June, and third quarter coupons will not become valid until July 26.

Outside the shortage area issuance of third quarter rations will be as previously announced, but outside operators running into the shortage area may not use third quarter coupons there until July 26. Operators in the shortage area whose trucks go outside that area should apply to their ODT District Office between June 16 and 30 for a special certificate and allotment for use in outside operations after July 1.

In addition to the 40% cut between now and July 26, accomplished by "stretching-out" current coupons to that date, ODT warns "that the present reduction will be followed by a systematic 'tailoring' of the Certificates of War Necessity of all commercial vehicle operators in the shortage area to carry the cut into the last half of the year if necessary." Indications are that this "tailoring" by the district offices may be drastic.

At the same time the ODT set up regulations on frequency of delivery for trucks in eastern states. The following interpretation of the latest curtailment order of ODT on truck deliveries in the eastern gasoline shortage area, as it applies to flour and feed, has been issued by the Washington office of the Millers National Federation.

"In the eastern gasoline shortage area, under Amendment No. 2 to General Order ODT No. 17, millers cannot now make more than two wholesale deliveries or two retail deliveries of flour or feed over an established route by motor truck during any one week. However, this limitation does not apply in the case of a one-stop wholesale or retail delivery directly to a single consignee where a full load is carried on the largest motor truck owned and ordinarily operated by a miller. Sunday wholesale deliveries are prohibited.

"The term 'wholesale delivery' is defined in the order as the transportation of property by motor truck from place of business to retail outlet. This means that deliveries of flour or feed from the mill or branch warehouse to a retailer are restricted, but the restrictions would not apply to deliveries from the mill to its own branch warehouse.

"'Retail delivery' is defined as the transportation of property by motor truck sold at the retail level for personal, family or household use or consumption.

"On or before June 8, every miller in the restricted area operating trucks for wholesale and retail delivery is required to establish within the territory presently served by each operating unit delivery routes that are neither duplicating nor overlapping. An appropriate map must be prepared and currently maintained for each operating unit showing routes established or the territorial limits of such delivery areas.

"After such routes are established, no miller will be permitted under the order to make more than two wholesale or retail deliveries, respectively, over any given route or within any delivery area. As above, exception is made for a one-stop delivery of capacity load of the largest truck to a single consignee."

BIG CANADIAN FLOUR SALES TO U. K.

WINNIPEG, MAN.—Export sales of Canadian flour to the United Kingdom, June 8, totaled approximately the equivalent of 7,000,000 bus of wheat (nearly 300,000 100-lb sacks of flour). This is believed to be the largest business of this type ever done in Canadian flour in one day.

HARRY W. ZINSMASTER GETS PLANNING JOB

Harry W. Zinsmaster, president of the Zinsmaster Bread Co., of Duluth, and of the Zinsmaster Baking Co. of Minneapolis and St. Paul, has been appointed chairman of the ninth federal reserve district Committee for Economic Development—a national movement for postwar planning and development. Mr. Zinsmaster is also serving as a member of the business advisory council of the Department of Commerce. He will be responsible for local organizations of the Committee for Economic Development in the ninth district. The committee, Mr. Zinsmaster says, is undertaking to encourage the individual employer to start his postwar thinking now and to help him keep thinking.

——BREAD IS THE STAFF OF LIFE——

NEW MALT INVENTORY ORDER

WASHINGTON, D. C.—Steps were taken by the War Production Board June 2 to assure maximum use of malt producing facilities by brewers.

Restrictions imposed by Conservation Order M-288 were removed under the terms of an amendment to the order. Previously, such brewers were not permitted to maintain an inventory of malted grain or malt syrup which, at any time, exceeded their inventory during the corresponding month of 1942.

The amended order will remove the possibility that production by brewer-maltsters might have been curtailed, because of inventory restrictions, at a time when the supply of malt is short.

No change is made in the inventory restrictions on brewers who do not produce their own malt, or in the restrictions on the use of malt by any brewer.

——BREAD IS THE STAFF OF LIFE——

CHARLES VARNEY, RETIRED FLEISCHMANN HEAD, DEAD

NEW YORK, N. Y.—Charles F. Varney, well known in the baking and allied trades industries, died at his home in Old Lyme, Conn., June 2, at 68 years of age.

Mr. Varney had been connected with the Fleischmann Co. for 34 years prior to his retirement in 1933, and at one time was manager of the firm's Detroit district. He is survived by two sons, both of whom are with Standard Brands, Inc. They are Russell W. Varney, director of industry service for the Fleischmann division of Standard Brands, and Dana R. Varney, manager of the Royal division of Standard Brands, southwestern region. Through them he kept in close touch with former associates and developments in the baking and allied trades after his retirement.

Mr. Varney was long regarded as one

William A. Quinlan
. . resigned as general counsel . .

Grover C. Patton
. . resigned as board chairman . .

Ralph D. Ward
. . new board chairman . .

John T. McCarthy
. . new president. . . .

Patton, Quinlan Resign From ABA; McCarthy New President

CHICAGO, ILL.—Resignation of Grover C. Patton as chairman and William A. Quinlan as general counsel and the election of Ralph D. Ward as chairman and John T. McCarthy as president has been announced by the American Bakers Association.

The resignation of Mr. Patton as chairman of the board of governors, deferred from the January meeting of the board, was accepted on his insistence, and with regret by the ABA executive committee. When Mr. Patton accepted the chairmanship in 1942, he asked that it be for one year only; however, at last January's meeting he agreed to continue for a few months longer. Mr. Patton is president of the Purity Baking Co. of Decatur, Ill.

Mr. Quinlan resigned to enter the private practice of law, effective July 1. His resignation was accepted with regret, expressed individually by every member of the executive committee of the association. A graduate of the University of Chicago Law School, Mr. Quinlan has been associated with the baking industry since September, 1933, when he was employed by the National Bakers Council in NRA days. He served as secretary of the council's committee on compliance and interpretations and was executive secretary of the national trade practice complaints committee.

With the dissolution of the NRA in 1935, he was employed by the American Bakers Association as secretary of the committee on public, industrial and trade relations and later handled all legal matters for the association and was appointed general counsel in January, 1939. With the growth of war complexities his office was transferred from Chicago to Washington in March, 1942. His work in these positions won him extensive commendation from the association and the baking industry at large.

Mr. Quinlan will become an independent legal advisor to various industries, with offices at 1317 F St., Washington. The severance of relations between Mr. Quinlan and the baking trade organization resulted from his belief that he had blazed the trail of the bakers in Washington for more than a year and provided a running organization with which the industry could carry on hereafter without requiring him to devote his entire time to one food client.

Ralph D. Ward, the new chairman of the board of the association, has been serving the association as president since the resignation of L. J. Schumaker in December, 1942. Mr. Ward also has been chairman of the ABA war committee since its formation. He is president of Drake Bakeries, Inc., Brooklyn, N. Y.

John T. McCarthy, the new president, has been executive assistant to the ABA president, since his resignation as chief of the bakery products section of the WPB in March, 1943. For many years connected with the Purity Bakeries Corp., he resigned in 1934 and subsequently purchased the Jersey Bread Co., Toledo, of which he is now president as well as president of the Sandusky (Ohio) Baking Co.

Mr. McCarthy will spend most of his time in the Washington office of the ABA, which will continue to serve the baking industry. Also in the Washington office are Searing W. East, assistant counsel, and Wilmoth C. Mack.

The ABA executive committee at its Chicago meeting created a War Service Fund to which the industry and bakery associations will be encouraged to contribute. This provides means by which individuals, firms and bakery associations may carry out their desire to help defray the cost of the valuable services now being rendered to the industry.

—BREAD IS THE STAFF OF LIFE—

SHORTAGE OF FLAXSEED EMPHASIZED AT MEETING

A meeting of the linseed oil industry advisory committee was held last week in Washington. There is not, according to the trade, sufficient flaxseed in sight to run mills until the new crop is harvested, and an acute shortage of oil and linseed meal is likely to develop unless Canadian and Argentine flaxseed is made available. The Canadian Wheat Board has allocated 750,000 bus of Canadian flaxseed for prompt shipment to the United States. This will be shipped from Fort William to Buffalo, for use by eastern crushers, and will help but not solve the supply situation. Much more will be needed.

—BREAD IS THE STAFF OF LIFE—

OPA SCHEDULES HEARING ON COMMUNITY CEILINGS

WASHINGTON, D. C.—The Office of Price Administration has scheduled a two-day meeting in Washington, June 15-16, to hear complaints or suggestions from retail and wholesale food dealers on operation of the community-wide ceiling prices recently established.

—BREAD IS THE STAFF OF LIFE—

R. D. COBB'S SON, AGE 10, DIES OF HEART ATTACK

Samuel Cobb, 10-year-old son of R. D. Cobb, sales manager for the W. J. Jennison Co., Minneapolis, died while on his way to school, June 4. He had eaten a hearty breakfast, and was running to catch up with two chums when stricken. A motorist took him to a hospital, but he was dead when he arrived there. An autopsy disclosed that death was due to congenital heart disease.

—BREAD IS THE STAFF OF LIFE—

OFFICERS RE-ELECTED BY N. Y. PRODUCE EXCHANGE

NEW YORK, N. Y.—Charles B. Crofton, of Leval & Co., Inc., was re-elected president of the New York Produce Exchange for a third term at the eighty-second annual election held June 7. Hugh Reid, of Simpson, Spence & Young, was re-elected vice president, and J. A. MacNair, H. J. Greenbank & Co., was re-elected treasurer.

C. J. S. Allan, Moses Cohen, Laurel Duval, Axel Hansen and W. C. Schilthuis were re-elected to the board of managers to serve two years. J. H. Blake was newly elected to the board of managers to serve two years.

of the best teachers of salesmanship in the old Fleischmann Co. He was born in New Hampshire, but spent most of his life in Detroit, returning to New England after his retirement. In addition to his two sons, he is survived by his widow, Mrs. Anne Walker Varney, and a brother, Chester Varney, of Cleveland. Interment was at the White Chapel Cemetery in Detroit.

—BREAD IS THE STAFF OF LIFE—

A. C. HOFFMAN ALSO QUITS OPA FOOD PRICE POSITION

WASHINGTON, D. C.—A. C. Hoffman, acting deputy administrator of Food Price Control, has resigned from OPA to return to the Department of Agriculture. Donald Wallace becomes sole acting deputy administrator for price. The two men were named successors to J. Kenneth Galbraith, who resigned May 31.

Turnover in the OPA executives attained record speed with Mr. Hoffman's resignation, six days after he got the job.

"It does seem a little strange," he acknowledged, "but the other arrangement was only temporary from the first."

Mr. Hoffman is returning to the Department of Agriculture where he formerly was connected with the Bureau of Agricultural Economics.

Mr. Hoffman's resignation from OPA to return to the Department of Agriculture is taken by the food trades to be a forerunner of a possible wholesale transfer of price and rationing functions of the OPA to the Office of the War Food Administration.

—BREAD IS THE STAFF OF LIFE—

MILLERS OF SOUTHERN ILLINOIS PLAN MEETING

ST. LOUIS, MO.—The fifty-eighth annual meeting of the Southern Illinois Millers Association will be held at the St. Clair Country Club, Belleville, Ill., Tuesday, June 22. Complete program arrangements will be announced later. However, among some of the problems to be discussed will be shortening, ceiling prices on wheat and proposal to shift wheat acreage, from Ohio Valley states. Election of officers for 1943 will take place.

BAKERS BOOK SOME FLOUR BUT FAMILY TRADE FADES OUT ENTIRELY

Some Bakers Take Fair-sized Amounts in Anticipation of Higher Prices—Government Asks for Bids on Several Large Amounts

Although the bakery trade is showing some unmistakable signs of interest in flour purchases, family business has faded almost completely out of the picture. Bakers, of course, have been buying very sparingly for quite some time and as a result stocks have been dwindling rather rapidly. Many of the current sales are to replenish stocks, but some inquiries indicate that bakers are giving some thought to round lot bookings, apparently figuring that there is a strong possibility of higher flour prices should a higher wheat loan rate be announced.

Millers in the Northwest reported demand as spotted, with the family trade very dull, but with improved inquiry from bakers. Sales last week averaged 42% of capacity, compared with 48% in the week previous and 90% in the corresponding period a year ago.

Not much activity was noticed in the hard winter wheat states of the Southwest, although the sales figure for the week did creep up to 39% of capacity as against 28% in the week before and 92% in the similar week a year ago. Family business, as elsewhere in the country, was very limited, and buyers were taking some flour but not with any great enthusiasm. Crop damage reports so far have not been interpreted as serious enough to precipitate any substantial bookings.

At Buffalo there was no general interest, but some buyers were in the market to round out their stocks; a few booked round lots. Throughout the East, sales were almost entirely confined to bakers, with small lots predominating. Family flour sales were almost completely absent.

Improved sales to bakers and more active shipping directions were the consensus of reports at Chicago. Throughout the central states sales were very slow.

On the Pacific Coast there was very little improvement in business, although the government's request for bids on several very substantial amounts of flour created much interest and came at a time when operating schedules were beginning to drop off somewhat. Export business was light and routine.

PRODUCTION

Flour production dropped off considerably last week as compared with the previous week because of the holiday. Total output of the mills reporting to THE NORTHWESTERN MILLER, accounting for 65% of the nation's production, amounted to 2,593,410 sacks (cwt), compared with 2,785,708 in the week preceding and 2,375,372 in the corresponding period a year ago. Two years ago the figure was 2,577,566 sacks (cwt) and three years ago 2,383,866. Only Buffalo reported a gain, the increase amounting to 8,000 sacks (cwt). In the Northwest, production declined 71,000 sacks (cwt), the Southwest 40,000, the central and southeastern states 3,000 and the North Pacific Coast 37,000. Complete details of production by various sections are listed in the table on the opposite page.

FEEDSTUFFS SITUATION UNIMPROVED, ALL SUPPLIES SCARCE

Demand Continues Urgent—Abundance of Pasturage for Livestock Feeders Only Bright Spot—With Corn Unattainable, Values of Other Feed Grains Show Continuous Advancement

The feedstuffs situation is unimproved. All items on the feed list are practically unobtainable, and demand remains urgent. An abundance of green feeds and pasturage appears to be the only bright spot and is taking care of the immediate needs of dairy and livestock feeders; however, the needs of the mixed and manufactured feed industry continue serious. With corn unattainable, the values of other feed grains have shown continuous advancement and the situation is now further complicated by the suspension of sales of CCC feed wheat. It is understood that plans are under way for the purchase and movement of a large volume of Canadian wheat for feed; however, the plan hinges on available transportation facilities and the benefits derived will probably be limited to the Atlantic Seaboard and New England states.

Influenced by further advances in hominy feed, the index number of feedstuffs prices advanced slightly to 177.4 compared with 177.3 for the previous week and 162.8 for the first week in June last year. The index for May was 177.0, compared with 177.4 for April and 164.8 for May 1942.

WHEAT FEEDS

There are no new developments in the general market situation for wheat feeds at the various producing and distributing markets. At Minneapolis the delivery situation appears tighter than ever. Mills are loaded with shipping instructions on orders already booked and in some cases are looking around for feed to assist them in filling mixed car orders. There are also no millfeed offerings on the open market at Chicago.

Wheat feeds continue very scarce at Kansas City and the urgency of the demand shows no sign of abatement. The already tight situation on wheat feeds has been further aggravated by the withdrawal of CCC feed wheat and inquiry for millfeeds has become more urgent.

The millfeed market at Buffalo remains very firm with no general offerings and with continued reduced allocations by mills in spite of some increase in production. The output of wheat feeds and ground wheat is all shipped promptly on previous orders and there is no accumulation of stocks.

OIL SEED CAKES AND MEALS

There is still nothing new to report concerning the situation on oil seed meals. No trade is taking place in linseed meal at all at Minneapolis as nothing is offered. The same situation holds true in soybean meal.

GROUND GRAIN FEEDS

Following the withdrawal of CCC feed wheat supplies, offerings of ground wheat were also withdrawn. Prices on the other ground grain feeds have advanced in sympathy with the higher markets for oats, barley, and rye. Fresh offerings of all the ground grain feeds are quite limited since the available grinding capacity appears to be well booked up at this time. Ground rye is quoted at $40 ton, ground oats at $50 ton, and ground barley at $45 ton, all f. o. b. Minneapolis, in sacks, car lots. Ground rye is available in rather good quantities but offerings of ground barley and ground oats are sparingly made as most grinders have a considerable tonnage already booked.

—BREAD IS THE STAFF OF LIFE—

SUPREME COURT UPHOLDS WHEAT PENALTY DECISION

WASHINGTON, D. C.—The Supreme Court has reaffirmed the constitutionality of legislation imposing a 49c bu penalty on wheat produced in excess of AAA quotas, either sold or consumed by the grower.

In a one-sentence order, the court affirmed a decision by the District of Columbia Court of Appeals on a new challenge of the legislation brought by Representative Lemke (R., N. D.), as attorney for a group of farmers in Ohio, Pennsylvania, Michigan and Kansas.

The court of appeals' decision dismissing the new suit was affirmed by the high tribunal "on the authority of" a preceding ruling sustaining the penalty.

Representative Lemke contended that the Supreme Court, in a unanimous opinion Nov. 9, had not held the legislation constitutional but had merely ruled that Roscoe C. Filburn, of Montgomery County, Ohio, who challenged the penalty, was in no position to complain because he had accepted benefits under the act.

In the new litigation, Representative Lemke contended his clients had not received benefits under the act.

—BREAD IS THE STAFF OF LIFE—

First Aid Work Shown to Elevator Superintendents

MINNEAPOLIS, MINN.—John R. Hartmann, of the American Red Cross, was the featured speaker at the May 25 meeting of the Minneapolis chapter of the Society of Grain Elevator Superintendents. Mr. Hartmann stressed the point that a little knowledge of safety first methods can save many lives, not only in industrial accidents, but in off-the-job accidents, too. He urged the elevator superintendents to see that their men are instructed in first-aid work in the free Red Cross training programs.

A series of demonstrations of proper first aid procedure was presented.

This was the final meeting of the 1942-43 season for the Minneapolis chapter, and plans were laid for resuming activities next fall.

The members stood for a minute of silence in honor of the memory of a deceased colleague, John R. Coughlin, of the Brooks Elevator Corp., whose death occurred early in May.

—BREAD IS THE STAFF OF LIFE—

BOSTON EXCHANGE ASKS FOR ACTION ON FEED SHORTAGE

BOSTON, MASS.—The Boston Grain and Flour Exchange, Inc., has sent telegrams to all New England members of Congress, asking relief from the threatened feed famine in this part of the country. F. J. Sennott, president of the exchange, signed the telegrams which stated in part: "Owing to a serious emergency that faces the feeders of livestock and poultry throughout New England, due to inability to purchase corn and wheat, we are appealing to you for instant action for relief. Inside of two weeks, if we are unable to get supplies of these two important grains, we will face a definite feed famine."

MILLERS TO SEEK SHOWDOWN ON SHORTENING TROUBLE THIS WEEK

Special Committee Looks for Conference With Davis and Brown, June 18—May Take Troubles to Congress if Appeal to Rationing Authorities Fails

WASHINGTON, D. C.—(Special)—Soft wheat family flour millers will attempt to force a showdown with governmental agencies on the home shortening situation June 18, when members of the special task committee will seek the ear of WFA Administrator Chester C. Davis and possibly Price Administrator Prentiss M. Brown.

Failing to get some action from the administrative side of the government, committee members may take their case to Congress, as the bakers did, and get some action from the legislative branch.

Meanwhile, Vice President Herman Fakler, of the Millers National Federation, is adding the finishing touches to a supplemental report on how the housewife is penalized under the present red rationing stamp system. The report is for presentation to price control officials, who thus far have been wholly unsympathetic to the appeal for some change in rationing of shortening by which family flour millers will be placed on the same commercial footing as millers of bakery flour.

WHEAT PRICES SHOW NO MARKED CHANGE

Quotations Hold Firm With Crop Outlook Uncertain—Rye Prices Continue Strong With Demand Active

Improved flour demand with the possibility of higher flour ceilings and reduced estimates of wheat production in the Southwest are largely responsible for the stronger tone in the wheat market. However, the trade is still cautious pending release of the wheat loan rate and the possible imposition of ceilings.

Prices About the Same

Rye prices continue to show remarkable strength as an active demand prevails. At Winnipeg rye futures prices last week reached their highest levels since October, 1937. July went to a high of 88¾c and October 89⅞c.

Warmer weather has been favorable for winter wheat in central portions of the belt and progress is reported fair to good. The crop is heading in the more southern parts of the Ohio Valley but the condition ranges from poor to good. From Missouri southward conditions range from fairly good to good. Harvesting has begun in north central Texas and will begin in southwestern Oklahoma as soon as fields are dried. The crop is developing satisfactorily in the eastern half of Kansas, but in western portions rain is badly needed. Seeding of spring grains is practically completed and healthy color and good root systems were reported from Minnesota. The seeding of spring wheat is still late in Canada and unofficial reports show about 97% of the seeding done in Manitoba, 92% in Saskatchewan and 82% in Alberta at the close of May. A year ago percentages were 96, 99 and 98, respectively.

In Europe wheat prospects continue more promising than a year ago in western portions of the Continent with prospects satisfactory in central areas. Substantial increase in acreage is reported for the United Kingdom where growing conditions were excellent. The new crop is making good progress in Turkey and with prospects excellent prices have declined sharply from recent record levels. Beneficial rains were received in Rumania but it is still too early to determine their effect on drouth stricken areas.

In the southern hemisphere May weather was favorable for plowing and seeding in Argentina and early seeded wheat made good growth. Wide areas however are again needing moisture and field work is likely to be interrupted in southern areas if relief is not received soon. Wheat seeding is well advanced in Australia with a reduction of 10% to 20% in acreage indicated by trade reports.

—BREAD IS THE STAFF OF LIFE—

PANCAKE FLOUR CEILING LAW CLARIFIED IN RULING

WASHINGTON, D. C.—OPA has issued the following interpretation on the applicability of two regulations covering flour mixes—pancake flour: "Pancake flour made from soft wheat flour and other flours, containing such ingredients as shortening, egg yolks, leavening agents and spices, is subject to Regulation No. 280, even though it is sold only to bakeries and restaurants. If sold in quantities of less than three pounds the General Maximum Price Regulation applies. Regulation No. 296 (flour from wheat, semolina and farina sold by millers and blenders) does not apply."

—BREAD IS THE STAFF OF LIFE—

UNITED STATES VISIBLE GRAIN SUPPLY

Visible supply of grain in the United States, as compiled by the secretary of the Chicago Board of Trade, in bushels (000's omitted), of date June 5.

	Wheat	Corn	Oats	Rye	Barley
Baltimore.	2,130	411	13	90	3
Buffalo ..	4,748	3,715	2,101	4,302	1,492
Afloat ..	267	...	...	...	...
Chicago ..	3,376	5,766	2,799	6,652	656
Duluth ...	33,385	1,137	53	1,964	946
Ft. Worth.	8,104	275	54	39	63
Galveston.	4,576	...	...	...	...
Hutchinson.	6,121	...	...	...	...
Indianapolis	1,204	1,050	116	32	...
Kan. City.	23,268	871	102	784	92
Milwaukee	469	166	3	423	2,293
Minneap'is	27,056	915	1,439	5,799	1,733
N. Orleans	2,038	126	79	21	...
New York	212	127	...	...	...
Omaha ...	7,785	1,855	83	244	119
Peoria ...	315	467	...	...	184
Philad'phia	1,596	200	21	38	1
Sioux City	1,812	208	8	18	21
St. Joseph	3,147	443	392	9	22
St. Louis..	4,244	861	266	529	179
Wichita .	3,934	4	4	...	4
Tot. June 5, '43 ..	139,787	18,597	7,473	20,945	7,808
Total June 6, 1942..	185,503	57,470	2,961	16,927	3,726

Rye Flour Output

Following is the rye flour output reported to The Northwestern Miller by mills at Chicago, Minneapolis and outside points in the Northwest, in sacks (cwts), with comparative figures for the previous weeks:

	Week ending		
	May 15	May 29	June 5
Five mills	42,223	*30,410	*34,239

*Four mills.

Flaxseed Receipts, Shipments and Stocks

Receipts, shipments and stocks of flaxseed at principal primary points for the week ended June 5, in thousand bushels, with comparisons:

	Receipts		Shipments		Stocks	
	1943	1942	1943	1942	1943	1942
Minneapolis..	225	134	42	36	379	1,020
Duluth	140	31	276	122	691	436

—BREAD IS THE STAFF OF LIFE—

BURLAP TRADE IN INDIA CONTINUES AT STANDSTILL

NEW YORK, N. Y.—Burlap buying continues at a standstill, although Calcutta cables reflect a drop in prices. The break is not sufficient to bring them within the ceilings imposed by the OPA and until this happens no trading can be done. The situation on light-weights has eased somewhat by the allocation of heavy-weights to the D.S.C. stockpile under the two thirds quota of imports, at the request of the War Production Board. This released the lighter materials for agricultural bagging, which is earnestly needed at the moment when containers are needed for maturing crops.

Since the Burlap and Bag Trade Advisory Committee has been informed in Washington that there is anticipated no relaxation of ceiling prices nor any lifting of these levels, many trade interests consider a subsidy on burlap a distinct possibility. This policy and additional purchases by the government in India to be resold here at a loss in line with the established prices are two suggestions to relieve not only the shortage of this textile, but also the resulting drain on cotton goods supplies which conversion to them has produced.

As an indication of the situation, used bag dealers have been asked by the chief of the Textile Bag Unit of the Containers Division, WPB, not to sell textile bags for wiping rags if they can be reused for packaged goods, particularly if the bags are of 75-lb size or larger.

The War Food Administration has announced a sales program for cotton bagging to supplement the available jute supplies on the 1943 cotton crop. This will be sold by the Commodity Credit Corp. and additional quantities will be available as present contracts with bag manufacturers are completed.

Approval by the House agricultural committee of the Fulmer bill has had little effect on the cotton situation since trade opinion does not believe it will ever become legislation.

Bemis Bro. Bag Co.'s cotton goods index, a composite figure reflecting wholesale prices of principal cotton cloth used in bag making expressed in cents per yard of cloth, is 8.00 as compared with 8.00 a year ago. The Bemis composite figure reflecting duty paid early shipment prices of heavy and lightweight Calcutta burlap expressed in cents per lb of cloth is 17.65 as compared with 14.72 a year ago.

Current Flour Production

An Exclusive Statistical » » » Readers of The for More Than » » »

A Little Down

Service Maintained for Northwestern Miller Half a Century » » »

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT)

(Reported by mills producing 65% of the flour manufactured in the U. S.)

	June 5, 1943	Previous week	June 6, 1942	June 7, 1941	June 8, 1940
Northwest	*572,029	643,693	522,755	560,985	526,968
Southwest	940,103	1,030,016	912,497	992,973	833,280
Buffalo	378,392	369,058	349,029	329,627	379,709
Central and S. E.	†488,376	491,139	316,436	368,374	395,677
N. Pacific Coast	214,510	251,802	274,655	325,607	248,232
Totals	2,593,410	2,785,708	2,375,372	2,577,566	2,383,866

*Partly estimated. †Incomplete.

	Percentage of activity					Crop-year production July 1 to	
	June 5, 1943	Previous week	June 6, 1942	June 7, 1941	June 8, 1940	June 5, 1943	June 6, 1942
Northwest	54	61	48	50	47	33,064,576	29,765,252
Southwest	66	73	66	72	62	53,986,789	48,690,348
Buffalo	65	63	60	57	66	20,606,818	18,816,586
Central and S. E.	63	62	49	55	54	21,567,525	17,966,272
N. Pacific Coast..	65	77	69	81	59	12,710,946	11,740,677
Totals	63	68	57	62	57	141,936,654	126,979,135

THE SOUTHWEST

56 Representative Mills

	Weekly capacity	Flour output	Pct. activity
May 30-June 5...	814,380	585,476	72
Previous week ..	814,380	648,459	80
Year ago	814,380	555,727	68
Two years ago ..	814,380	583,059	72
Five-year average			62
Ten-year average			59

Kansas City

May 30-June 5 ..	352,800	207,300	58
Previous week ..	352,800	213,933	61
Year ago	352,800	209,924	59
Two years ago ..	352,800	250,110	71
Five-year average			64
Ten-year average			63

Wichita

May 30-June 5 ..	111,132	79,194	71
Previous week ..	111,132	93,864	84
Year ago	111,132	70,211	63
Two years ago ..	111,132	61,922	51

Salina

May 30-June 5 ..	109,956	68,133	62
Previous week ..	109,956	73,760	..
Year ago	109,956	76,695	70
Two years ago ..	109,956	97,882	89

PACIFIC COAST

Principal mills on the North Pacific Coast:

Seattle and Tacoma District

	Weekly capacity	Flour output	Pct. activity
May 30-June 5...	185,808	94,684	51
Previous week...	185,808	121,806	66
Year ago	256,368	150,602	59
Two years ago ..	265,776	215,573	84
Five-year average			57
Ten-year average			55

Portland District

May 30-June 5 ..	143,200	119,826	84
Previous week ..	143,200	129,996	91
Year ago	143,864	124,052	86
Two years ago ..	146,608	110,034	75
Five-year average			71
Ten-year average			61

THE NORTHWEST

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, South Dakota, Montana and Iowa:

	Weekly capacity	Flour output	Pct. activity
May 30-June 5 ..	738,822	353,110	48
Previous week...	738,822	398,374	54
Year ago	738,822	343,241	46
Two years ago ..	763,518	359,299	47
Five-year average			46
Ten-year average			44

Production for current week was partly estimated.

Minneapolis

	Weekly capacity	Flour output	Pct. activity
May 30-June 5 ..	319,284	218,919	69
Previous week ..	319,284	245,319	77
Year ago	353,388	179,514	51
Two years ago ..	351,036	201,680	57
Five-year average			51
Ten-year average			46

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	Weekly capacity	Flour output	Pct. activity
May 30-June 5 ..	*780,042	488,376	63
Previous week ..	*796,506	491,139	62
Year ago	635,412	316,436	49
Two years ago ..	675,847	368,374	55
Five-year average			54
Ten-year average			55

Current week partly estimated.

*Including mills not previously reporting.

BUFFALO

	Weekly capacity	Flour output	Pct. activity
May 30-June 5 ..	577,416	378,392	65
Previous week ..	577,416	369,058	63
Year ago	577,416	349,029	60
Two years ago ..	568,008	329,627	57
Five-year average			65
Ten-year average			69

MILLFEED OUTPUT

Production of millfeeds, in tons, for the current and prior two weeks, together with season totals of (1) all mills of Nebraska, Kansas and Oklahoma and the cities of Kansas City and St. Joseph; (2) all mills of Minnesota, North and South Dakota and Montana, including Minneapolis, St. Paul and Duluth-Superior; (3) mills of Buffalo, N. Y. (computed from operation reports made to The Northwestern Miller by more than three fourths of the flour milling capacity of the territories included):

	Southwest		Northwest		Buffalo		Combined	
	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop year to date	Weekly production	Crop yr. to date
May 30-June 5..	22,652	1,307,046	11,624	662,522	7,240	391,567	41,516	2,361,135
Prev. week	24,903		13,152		7,061		45,116	
Two weeks ago.	23,489		11,904		7,453		42,846	
1942	21,941	1,171,002	10,403	587,892	6,644	361,351	38,650	2,119,907
1941	23,735	1,117,212	10,713	533,237	6,307	358,404	40,755	2,008,853
1940	19,840	1,087,344	10,223	550,736	7,265	346,820	37,328	1,985,400
1939	21,110	1,073,185	11,318	558,009	7,805	369,472	40,233	2,000,666
Five-yr. average	21,856	1,151,258	10,856	578,479	7,052	365,523	39,764	2,095,260

More Normal Weather Favors Crop

The freakish spring weather has turned more normal over most of the wheat growing areas this week, and the change has favored the growing crops. This has been a year when both floods and drouth were attacking crops simultaneously within a few hundred miles. Rains lately in the dry sections of the southwestern plains rescued thousands of wheat acres that were approaching ruin, while less rain and more sunshine in the central and northwestern states also benefited the retarded crops in those areas.

Cool wet weather was general during May in nearly all sections of the grain raising country. In the lowlands of the central states more warm weather is needed before many farms will be dry enough for working. The soft winter wheat crop of the central states will be smaller than normal. In the hard winter wheat sections, conditions show a wide range, with some improvement in the central and northern sections and beneficial rains in the western areas. Cool wet weather has retarded spring wheat in the Northwest, but these conditions may ultimately prove beneficial, if not prolonged.

★ ★ ★

DODGE CITY, KANSAS.—A two-inch downpour terminated the seven-month dry period at Dodge City. This belated rain, following 99° temperature and a 40-mile wind on June 2, may bolster up some of the wheat which was registering a new low. A few more hot days and hundreds of thousands of acres would have had to be marked off from any production possibility. Now that more rain is promised deterioration at least will be arrested and there may be some recovery. Certainly pastures will be greatly benefited. Farmers can go ahead with confidence and plant their crops of milo and sudan if they can find seed.

★ ★ ★

NEWTON, KANSAS.—*Wheat crops in Marion, Sedgwick, Sumner and Harvey counties in Kansas are late, with condition less than average, and prospects of heavy Hessian fly damage. There still is a large acreage of Chiefkan in these counties and many fields of Red Chief. In wheat variety tests at the Wichita experimental field, Pawnee wheat showed an excellent resistance to Hessian fly damage, while Comanche did not show up good in this respect. Leaf rust is rather general in this area, but no stem rust is apparent. Heavy showers fell in this section, June 7.*

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MINNEAPOLIS, MINN.—Winter wheat generally is making steady progress, the Cargill Crop Bulletin states. The eastern soft wheat states suffered considerable damage from the heavy rains, but fields that were not flooded or washed out have improved. However, only a very small crop of soft winter wheat is in prospect this year. The Southwest hard winter wheat area promises a fairly good outlook. Excessive moisture harmed the crop in eastern Kansas but improvement is apparent in the central and northwest. Drouth over the southwest, the former Dust Bowl area, is again retarding progress of the crop. Oklahoma is showing some improvement while Texas is now harvesting a fair to good crop in the southern and central sections and will start soon in the Panhandle. Prospects are good in Nebraska and Colorado. Spring wheat and durum seeding was accomplished under fair weather and soil conditions and the crop generally is showing a healthy color and good stand. Cool weather over Montana, the Dakotas and Minnesota caused heavy stooling and developed a sturdy root. The large acreage sown in the Pacific Northwest, replacing much of the winter wheat that was lost, is now developing rapidly and good prospects are reported. Conditions in South Dakota are not so favorable as drouth has affected the crop in several sections. Recent rains will improve some districts, the bulletin states.

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TOLEDO, OHIO.—*Toledo has had the heaviest fall of rain for May in 73 years, and that's an indication of conditions generally in the central west; 85% of the Ohio corn crop has not been planted. Michigan estimates wheat crop at 13,209,000 bus, 13% less than last year due to reduced acreage, which was smallest in more than 75 years. Loss from winter killing has been heavier than usual.*

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WASHINGTON, D. C.—Reports to the Bureau of Entomology and Plant Quarantine show no stem rust infestation on wheat at the close of May in northern Oklohoma, in Kansas, or in Missouri. A small amount of stem rust was found on durum and common wheats in an area between Temple and Dallas, Texas, and also in a section between Wichita Falls and Frederick, Okla. Wheat in Texas and some distance in Oklahoma was mostly in the dough state, as of May 22, and it appeared unlikely that any large quantity of inoculum will develop despite the extraordinary wet conditions.

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INDIANAPOLIS, IND.—*Temperatures during the week averaged slightly above normal, and precipitation was light. Wheat on higher ground is making fair to good growth, and is now heading. However, the crop will be short. Rye, barley and oats are making fair to good progress. Corn planting is getting under way with about 10% now in. Less rain permitted field operations but many fields are still too wet to work.*

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MINNEAPOLIS, MINN.—Temperatures are still unseasonably low in the Northwest, and line elevator companies say favorable growing weather is necessary at once if harvest is going to be within the normal range. There was heavy precipitation in Minnesota and North Dakota, but not as much as was hoped for in South Dakota and Montana. Even some snow fell late in the week in North Dakota. While the temperature hovered around the freezing point some nights, no reports of damage have come in. Warm, growing weather is badly needed all over the Northwest, and more moisture in South Dakota.

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PORTLAND, ORE.—*Crops are growing slowly, especially in some of the spring wheat areas, where plowing is not yet finished. Weather has been too rainy in spring wheat sections to finish up, but earlier crops are looking fair. A gradual improvement in winter crops is noticeable in this area. Spring crops are considerably behind schedule.*

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WINNIPEG, MAN.—Temperatures dropped below freezing at many points in western Canada last week and a few points reported light falls of snow. Rain was general and proved beneficial to crops in large areas. In Manitoba, however, in many areas the soil was water-logged and water covered the ground leaving numerous miniature lakes. Rain fell almost continuously throughout the week over most of Manitoba. Very little progress was made in completing the seeding of coarse grains and flax. Warm, sunny weather is urgently needed to promote favorable development. At the close of the week the weather showed signs of clearing and higher temperatures were indicated.

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TORONTO, ONT.—*Spring has been exceptionally late in Quebec with heavy rains delaying seeding operations. Much of the heavy, low-lying lands are still unworkable. In some sections three-quarters of the grain crops have been sown and in others only one third. In Ontario a late wet spring has hampered seeding. However, with the last few days of dry, sunny weather progress is now being made. Fall wheat is thin and patchy although making good growth. The area remaining after winter killing is 601,000 acres compared with a harvested acreage of 757,000 in 1942.*

Several Amendments . . .

Flour Ceiling Order Revised for Freight and Bag Changes

WASHINGTON, D. C.—Revision of Maximum Price Regulation No. 296 has been made by the Office of Price Administration to facilitate price changes required by reduced freight rates and the change to the 100-lb sales unit. At the same time, other amendments remove wallpaper paste from price control and exempt sales of flour to U. S. agencies made from wheat purchased at parity from any U. S. agency.

The amendments become effective on June 11.

Because the flour milling industry at this time of year is processing wheat which originated some months earlier, the freight charges on which are not affected by the May 15, 1943, reduction, OPA has permitted millers to continue using the rates in effect prior to May 15 in computing their maximum prices.

This provision, which will delay reduction in maximum flour prices until the mills have used up a portion of their old transit billing, expires on Aug. 1, 1943, for southwestern millers and on Sept. 1, 1943, for northwestern.

At that time, all deliveries of flour in areas where freight is a part of the maximum flour price computation will have to be made at prices based on the lower freight rate even though some of the flour delivered after the Aug. 1-Sept. 1 deadline may be milled from wheat carrying billing on which the higher rates are payable.

This action was taken through Amendment No. 4.

In line with War Production Board Conservation Order M-221, which restricts the sizes of cotton and paper containers for selling flour made from wheat, semolina and farina to 2, 5, 10, 25, 50 and 100 lbs, the amendment further revised the regulation to provide for pricing sales of the flour by the hundredweight rather than by the barrel. Incorporated in this change is a provision for adjustment of existing per barrel differentials to a hundredweight basis for the addition of enriching and self-rising ingredients, and for less than carload quantities.

1. Section 1351.1666 VI is amended to read as follows:

VI. **Maximum prices for family cake flour, and family whole wheat flour, and for family farina, enriched and unenriched.** (a) At all destinations, the maximum prices for family cake flour and family whole wheat flour shall be as follows:

(i) When packed 12 2¾ lb packages or 24 1¼ lb packages to the case, $2.75 per case.

(ii) When packed in packages containing 5 lbs or less, other than the package and case sizes covered by (i) hereof, 7½c per lb plus the cost of packages, labels and shipping containers.

(iii) When packed in packages containing more than 5 lbs, the same as the maximum prices for family flours in like packages as elsewhere set forth in this Appendix A.

(b) At all destinations the maximum prices for family farina, enriched and unenriched, shall be as follows.

	Less than Carlots	Carlots
(i) When packed 18 28-oz packages to the case....	$3.47½	$3.55
(ii) When packed 24 14-oz packages to the case....	2.70	2.75

(iii) When packed in packages containing 5 lbs or less, other than the package and case sizes provided for under (i) and (ii) hereof, 9⅝c lb plus the cost of packages, labels and shipping containers.

(iv) When packed in packages containing more than 5 lbs, the same as the maximum prices for family flour in like packages as elsewhere set forth in this Appendix A.

2. Section 1351.1666 (XVI) is added to Maximum Price Regulation 296 and reads as follows:

xvi. **Conversion to cwt basis, bulk basis, and container differentials.** (a) All maximum prices hereinbefore set forth on a per barrel basis may be converted to maximum prices per hundred weight by dividing the appropriate maximum price per barrel by 1.96 and rounding the result to the nearest cent.

(b) All differentials set forth in subdivisions (xii), (ix) and (x) of this appendix, may be converted to a differential per hundred weight by dividing the appropriate differential by two and rounding the result to the next highest cent.

(c) The maximum price per hundred weight in 100-lb cotton sacks may be converted to a maximum price per hundred weight bulk by deducting 16c per hundred weight.

(d) The maximum price per hundred weight in 100-lb cotton sacks may be increased for seller's containers other than 100-lb cotton sacks by the differentials

(Continued on page 28.)

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Milling for the Duration

(Continued from page 6.)

relieve local critical conditions. First and foremost was included Buffalo, and figures were freely named with respect to the shortage of labor in the Buffalo area, the shortage of power in the Buffalo area, and the transportation bottleneck created by the tremendous amounts of flour and grain products milled at that point. The fairness of the individuals involved on the government's side of the table, however, is clearly shown in the reaction to the true picture of the conditions prevailing there. The same thing could be said about several other points. Concentration of capacity, however, is not now, so far as I know, receiving any particular consideration by the government; rather, they are now talking about expanding capacity.

GRAIN AND FEED PROBLEMS

Another of the government's problems which affected our industry was the storage of wheat. Many of you know the situation that existed prior to harvest a year ago—633,000,000 bushels carried over, over half of it in the hands of the government, either owned outright or through loans. It was freely predicted that substantial amounts of wheat would go on the ground at harvest time. It did—but it didn't stay there. We think too much of it went into various types of temporary storage, with a resulting deterioration in the quality of the grain itself.

The tremendous demand for meat, poultry and dairy products resulted in a critical situation developing with respect to millfeed. This led to the first ceiling attempt directly affecting our industry.

The industry, the OPA, the feeders and the feed mixers were all, I think, somewhat surprised that the ceiling order has functioned with as little dislocation as has been the case, and speaking as a miller, as much as I dislike that type of control of the free enterprise on which our nation was built, I shudder to think what the situation would be in the milling industry today had we not a ceiling on millfeed that says any offal from the processing of wheat may not be sold carloads at more than $36.50 Kansas City. If you wanted sleepless nights for mill management and extremely jittery days for the financial interests involved in mill operations, uncontrolled feed prices today would go far toward supplying just that. Offhand, I can think of nothing that would be more unpleasant than an attempt to sell flour under present conditions for delivery over a period of months with millfeed prices affected by the critical shortage in feeds which now faces us.

THE FLOUR CEILINGS

As a result of the President's order, flour was included in a temporary ceiling order Oct. 3. Frankly, very few of us in the milling industry have yet been able to satisfy ourselves in our own minds why the President included flour in that order. So far as we know there has been no criticism anywhere along the line with respect to flour values and the only possible conclusion seems to be that if they were to put a ceiling price on bread they should at the same time invoke a ceiling price on flour. In flour

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ceilings, we who worked with the Office of Price Administration in working out the ceilings were agreeably surprised at the understanding of our problems and the desire to be fair to all sections of the milling industry in any order that might be worked out.

One point which we raised time and again was the fact that in setting a ceiling on flour it should be with a definite relationship to certain wheat values and certain millfeed values. In time of war no one can object too seriously to our government stating that for a given service you shall be compensated for so much and no more; that you may not take advantage of a period of national crisis to impose on a consumer an unfair and unreasonable price for a necessity. However, at the same time, a control has no stopping place, and the control should be on margins and not on prices, unless the raw materials and offal involved are likewise controlled.

Again, the flour ceilings were put into effect after a period of great dislocations due to those very factors, yet the permanent order in January was well received, and though it included some inequities and still includes some inequities, generally speaking it is a document that reflects a sincere desire on the part of honest and straightforward government servants to be fair to the processor as well as the consumer.

During the temporary ceiling we had a wheat market which forced many mills out of the market and threatened major dislocations. That was averted by the release of the permanent order, and an easing in feed prices shortly after that brought about a provision by the government to support feed prices at $1.50 per ton under the ceiling. Only in one two-weeks' period has it been necessary for this support to become operative.

All in all, both the millfeed and flour ceilings are working as well as one could reasonably expect such an abnormal provision as that to work. However, in the soft wheat industry a very difficult situation immediately arose due to the short crop, the extreme scarcity of supplies, and the fact that the government stocks were not sufficient to be of any major help. This was followed by an upward revision of soft wheat prices, and at the same time conferences as between the industry and the government were instituted looking to some other means of easing the situation.

The rather summary taking over of Latin-American business by governmental agencies was brought about by the development of a crisis in Puerto Rico due to lack of shipping space, and all flour into that market, as most of you know, is now handled by the government. Under the Webb-Pomerene Act a corporation was formed, the Flour Millers Export Association, with headquarters in Washington, to co-operate with the Bureau of Economic Warfare and other governmental agencies with respect to the handling of private business into the other Latin American markets. I regret to say this has been only partially effective.

ALCOHOL AND FEED WHEAT

Affecting your industry and mine is the alcohol program, instituted last fall, but developed into a broad scale during December. This has employed a substantial amount of milling capacity, is eating rapidly into the surplus wheat stocks, and it is expected that before

(Continued on page 33.)

He's already known to many bakers throughout the country but there are many more who would find him a real "friend".

He comes from a mill that's been in the business long enough (60 years) to know that a baker wants "strength" and "uniformity" to be more than mere words.

We draw on wheat from the great Northwest wheat growing area, mill it carefully and then speedily send "Big Jo" out to help you do a real production job. Just send us a "wire," we'll do the rest.

THE BIG JO FLOUR MILLS
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Quality Millers Since 1879
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Country-Milled from Country-run Wheat located in the very center of the High Protein Turkey Wheat Country.
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The WALL-ROGALSKY MILLING CO.
• McPHERSON, KANSAS •

Today & Yesterday

FOOD AND ITS RELATION TO ABSENTEEISM

"One way to get more food value from the meat and other foods available in wartime is to prepare and serve them in a manner which preserves food values," says Dr. Robert S. Goodhart, chief, Nutrition in Industry Division, War Food Administration.

There is evidence that many of the usual practices associated with the preparation and service of food in plant cafeterias and restaurants result in serious losses in food values, points out Dr. Goodhart.

The effect these food losses may have on absenteeism and production, as well as ways in which food may be selected, prepared and served to reduce unnecessary losses in food values, is outlined in a booklet, "Manual of Industrial Nutrition," just released by the Nutrition in Industry Division.

Workers whose diet is deficient in thiamin (vitamin B_1) develop fatigue, lassitude and loss of appetite; the more active the individual, the sooner severe symptoms develop. Depressed mental states, muscle soreness, and backaches also develop, and the capacity for muscular work decreases, according to results of studies outlined in the manual.

Food value losses of thiamin (B_1) ran as high as 92% in the preparation of a meal of meat, potatoes and beans in one plant cafeteria kitchen, it is revealed in the manual.

This booklet, a monthly news release for employee publications, and a free technical advisory service for war plants facing food problems due to increased dependence of workers upon in-plant food service is available upon request from the Nutrition in Industry Division, War Food Administration, U. S. Department of Agriculture, Washington, or from any one of the seven regional offices of the Food Distribution Administration.

▪ ▪ ▪

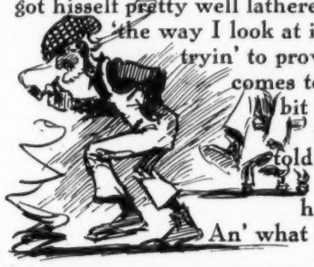
THE YOUNG IDEA

Recently the *American Agriculturist* said:

"J. Kenneth Galbraith of OPA is reported to have asked exemption from draft for a 28-year-old member of his staff on grounds that New Deal methods during the last 10 years have brought into existence a totally different science of economics and business controls which are understood and can be managed only by very young men free of the out-of-date theories of old-time economists and the working habits that practical men have learned from experience."

Maybe so, but I would recommend to the administration that, having tried everything under God's heaven and failed, they now bring out the old price mechanism and dust it off, oil it up and start it to work again. It might surprise them. I am sure, at least, that it would start the movement of corn.—*J. A. McConnell, Chairman of the Feed Industry Council.*

"Uncle Joe Granby," said Old Dad Fetchit of the Fish River Roller Mills, "was down here the other day walkin' up an' down restless as a flea bit dawg on account that Red Sawyer and Hy. Gallup an' a lot of other crick millers was sellin' flour so cheap he couldn't compete with 'em and get his cost back, let alone lay up any profit. 'Well,' says I, when he'd got hisself pretty well lathered up an' stopped to take breath, 'the way I look at it is that so long as you keep on tryin' to prove you ain't no coward when it comes to price cuttin', you ain't a dang bit better'n they are. It's goin' on thirty-four years since my paw told me that when the boys started price cuttin' he always pegged his sellin' figger an' went fishin'. An' what my paw done I'm still doin'.'"



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BRITISH COMMENT ON THE FOOD CONFERENCE

The British press has given considerable attention to the United Nations Food Conference at Hot Springs, Va. An editorial writer in the *Times* said Mr. Roosevelt had again shown his genius "for understanding the needs, the preoccupations and the feelings of the multitudes of ordinary men and women."

The Liverpool trade journal *Milling* could not share this feeling. Said the editor:

"If the conference could take charge of the weather and also of the economic policies of the 40 countries represented, it would be another matter; but since it will not be able to do either the one or the other, it is more likely to deliver a few innocent and harmless industries into the obliging and smothering embraces of bureaucracy than to do much good to suffering humanity."

This comment appeared in *Corn Trade News:*

"All men of good will are agreed that the alleviation of hunger and want must be the paramount aim of postwar national and international policy. Different views may be held and differences may, indeed, arise as to the best method of securing the objective, and it is a fact that success will not be attained unless all countries show more willingness to make sacrifices for the general good than they have displayed in past years. As to grain and other food trades, we are sure they are willing to co-operate to the utmost. The general raising of the nutritional standards of peoples of the world will involve a very great expansion of international trade—as pointed out by the British delegation—and not least in the feedingstuffs trade. Higher nutrition means the consumption of more meat, fats and dairy products and this, in turn, will create a heavy demand for feeding cereals, oilcakes and offals, etc., which are normally handled by the grain trade. We are certain that the grain trade will, when the time comes, be organized and prepared to play its part in meeting these broader requirements."

▪ ▪ ▪

The British Ministry of Food is urging the people to eat more potatoes and less bread in order to forestall possible bread rationing.

SONG OF THE FIELD BAKER

You have read about the heroes upon the land and sea
Who had decorations pinned on by the King.
I'll tell you of a worker, he is a hero, not a shirker,
He's the boy who makes the bread at West Sandling,
His bakeshop is not modern, or yet quite up to date,
Just like his sleeping quarters, it's a tent.
It may be fine in summer but in winter it's a hummer
When the cold wet rain comes trickling down your neck.

The ovens that he bakes in are open to the sky
And when lit up they turn the darkness into day,
Now they're broken up and busted and fact, they're quite a lark.
Unless the oven doors are plugged with mud.
The troughs are long, deep boxes, like dugouts stripped of bark
They are rotten things to work in, in fact, they're quite a lark.
And were used by Noah's baker while baking in the Ark.

He starts amaking dough in that beastly awkward trough,
He is mixing, turning, cutting all the time.
When at last his task is finished, and the final turn adminished
You can bet your life he's earned his dollar dime.
He may not be a hero, no such luck as face the Hun,
Or be mentioned in dispatches at the Front.
But when the war is over, and each one gets his place
It's the baker you will find who's borne the brunt.

(As quoted by the *Canadian Baker.*)

▪ ▪ ▪

The man who baked the first loaf was a Chinaman. His name was Ching-Noung. He was the first to teach his countrymen the method of making bread from wheat and wine from rice. Ching-Noung was born in the year 1998 B.C., and we must assume he baked his first loaf about 30 or 40 years later.

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MILLING PRODUCTION SECTION

JUNE 9, 1943

IN TWO SECTIONS—SECTION TWO

WHEAT GRITS TO ALCOHOL

Tons of wheat grits, destined to become 190-proof alcohol for use in the manufacture of synthetic rubber and other war materials, pour out when the doors of a box car are opened at a Schenley Distillers Corp. plant. A trough-shaped conveyor belt picks up the grist of grits and dumps it into elevators for the trip to meal bins on the upper floors of the distillery. (Articles on page 3a).

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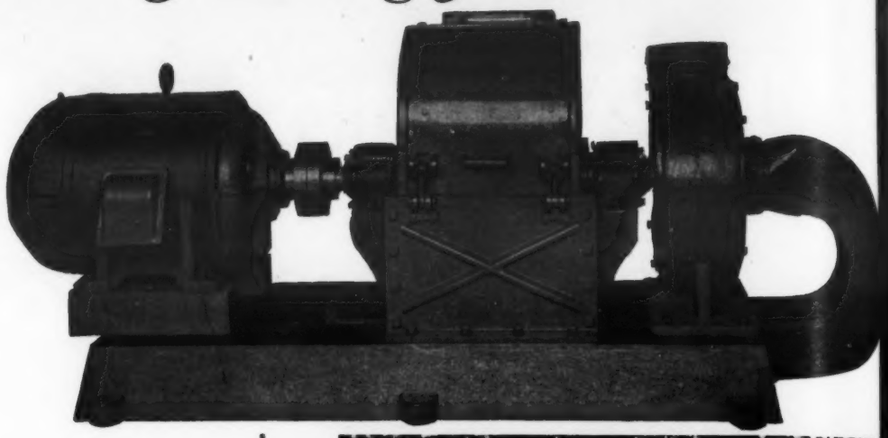
Grinding—the Basis of Feed 24a

Volume 214 • Number 10

Stay On Top of Your Grinding Job—with

FORSTER'S HEAVY DUTY GRINDERS



Low Power — High Output

We have found no hammer mill job too tough for the FORSTER HEAVY DUTY GRINDER.

This tremendous feed year, with 225,000,000 bus of feed wheat added to the hammer mill load of the greatest grain crop in history, brings out any sleeping bug in a hammer mill.

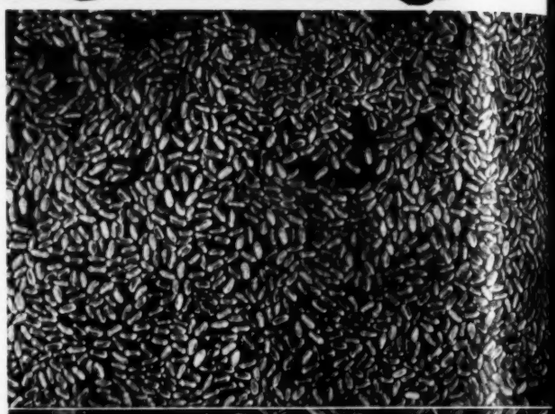
No bugs appear in the FORSTER HEAVY DUTY. It rolls on through the heaviest work, doing its job quickly and efficiently.

It allows you millers to keep on top of your grinding job because it is built to stand the gaff, and machined to do it economically.

All FORSTER feed mill machinery is built for the 1943 pace. In this, of all years, breakdowns are fatal. FORSTER machines are built to operate without sick leave.

Call us in on your hammer mill problems. Let us work with you on that feed mill, for it may be that our engineering will save you precious labor and save you also precious breakdown time.

We'll help you keep on top of your feed production job.



FEED WHEAT

BARLEY

OATS

CORN

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GRAIN SCOURERS ★ WHEAT CONDITIONERS and WASHERS ★ DUSTERS FINISHERS ★ SEPARATORS ★ HAMMER MILLS ★ FEED MILL MACHINERY

Granulated Wheat Flour in the Making of Alcohol

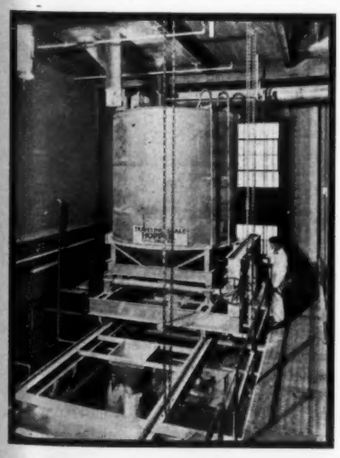
By S. L. Fisher
Schenley Distillers Corp.

An Address Before the American Association of Cereal Chemists at St. Louis, Mo., on May 17.

THE milling industry is to be congratulated for its important step toward producing from a surplus grain grits that increase the yield in the manufacture of high-proof alcohol for war purposes. Last fall, when this product was more or less in the formative stage, Schenley Distillers Corp. was attracted to it since it might enable us to produce more alcohol for our government.

We bought 1,500 tons for a trial run. Certainly, we had our troubles, but we also noticed that our alcohol yields were higher—ranging from three to eight per cent. Immediately we made arrangements to use these grits at all but three of our plants. At two plants we are feeding steers, making it necessary to continue to use corn. At the third plant we are extracting corn oil. Crude corn oil, as you know, is sorely needed.

Alcohol production figures and dried grain yields varied with the different plants and at time agitators were necessary to obtain full fermentation. We experimented with different proportions in the mash and found about 40% grits and 60% wheat or corn gave the best results, both in alcohol and dried grain yield. Moreover, this proportion was



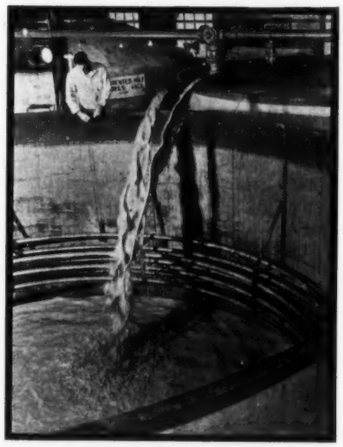
There's no guessing when it comes to determining the amount of grits to be used in making alcohol. Traveling scale hoppers weigh the "recipe" to the exact proportion before the grits flow into mash tubs.

easier to handle in the fermenters, and the fibrous grain gave the glutinous flour something to cling to in the dry house.

The fat content in the dried grain is naturally lower while the protein content is higher. Some straight flour dried grains ran to 40% protein, and a mixture ran as high as 36% where evaporators were used. Plants equipped with evaporators have definitely better results than those without. Due to the thinness of the material, plants without evaporators lose practically all this material after going through the presses.

Unloading is a difficult job. Dust flies everyhere and causes a large shrinkage. It takes two to three times as long to unload a car of grits as compared to grain.

There are two ways in which the product can be improved. One is to use soft red or soft white wheat, both of which should give a much higher alcohol yield. Another is to find some way



Cooked grain mash is being pumped into a Schenley Distillers Corp. fermenting tank in this photograph, while a workman takes the temperature. During the time that the action of the yeast in the mash aids in converting grain to munitions alcohol, cooling pipes encircling the tank will help maintain proper temperature.

to obtain a much coarser grit, but at the same time taking out the bran, etc., according to specifications. This would enable quicker unloading of cars and a free-flowing material can be handled through the plant easier and much more economically.

Temperatures at which the mash is cooked in our various plants vary from 156° F. to 305° F. for the wheat grits. In one plant the wheat grits are cooked separately in open mash tubs at 156° F. At this same plant the wheat meal ground from whole wheat is cooked at 305° in pressure cookers and the resulting two mashes are mixed together in the proper proportion in the fermenter. Several of the other plants which have nothing but open mash tubs cook this mixture to 212°. Plants equipped with pressure cookers follow the same procedure of mixing the two grains in the cookers and cooking this mixture to 305° F.

There seems to be no appreciable difference in yield in the mash tub plants regardless of whether the wheat and wheat grits are mixed or whether they are mixed after cooking separately at the above mentioned temperatures. Plants equipped with pressure cookers, of

In the yeast room of a converted whiskey distillery now making industrial alcohol the operator is opening a valve to add yeast to the wheat grits mash in a fermenting tank. Photo by Office of War Information, Washington, D. C.

course, obtain a slightly higher yield by cooking to higher temperatures. There is no evidence of scorching of the mash in any of the plants regardless of the temperatures used up to 305° F. From our experience, it is unnecessary to cook the wheat grits at temperatures above 156° F. However, the meal ground from the whole wheat must be cooked to at least 212° F. to prevent foaming in the fermenters. Alcohol yield from this mixture of wheat grits and wheat to date has been approximately equal to that normally obtained from corn meal.

All of the plants follow the same procedure as regards fermenter setting temperature as they normally followed when setting mash made from corn. There usually is a slight difference in the gravity of the finished beer as compared with beer fermented from corn mash, the latter usually showing a gravity of —.1° Brix and the present beer usually having a gravity of +.3° Brix.

Use of wheat and/or wheat grits has worked out very well for the yeast mash. The usual gravity readings of 24° Brix for the yeast mash and 9° Brix for the finished yeast are obtained. These readings, of course, vary with each individual plant but in all cases they are exactly the same as obtained when using rye and malt, which comprises the usual type of yeast mash.

Currently, we are using approximately 8,000 tons of grits monthly. Because of the increased yield obtained from grits, Schenley is producing at a rate in excess of 36,000,000 gallons of 190-proof alcohol a year.

Grains Used in Manufacturing Industrial Alcohol

By R. S. Mather
Joseph E. Seagram & Sons, Inc.

From an Address Delivered Before the Association of Operative Millers at Kansas City, Mo., on June 9

THE history of the distilling industry in America might be written up to sound the same as the milling industry and still be the truth, because each was making history at exactly the same time by the same type of pioneers. As the pioneers moved west and settled our country, whisky, alcohol beverages, and flour or meal were among the first products manufactured. Each was used as a medium of exchange; each was used as a method of livelihood.

When flour and corn meal were first manufactured the offal that was thrown away fermented into a beverage which the pioneers found was warm to the stomach. Transportation was a problem but the pioneers found they could move whisky easier than they could the corn and furthermore they could exchange whisky for furs and other products better than they could corn.

In Kentucky many of the old distilleries started originally as grist mills, but ended up by discontinuing the making of flour and meal. They found it more profitable to manufacture an alcoholic beverage.

As our country developed, the two industries, whisky and flour, separated into independent organizations, each surviving by its own merits.

It is interesting to note that now after 200 years the distilling industry and the milling industry are again being closely associated in one great effort, namely winning the war—the milling industry furnishing a semirefined product which the distilling industry in turn ferments and distills into alcohol to be used in the manufacture of explosives, synthetic rubber and many other products.

Corn has been used in larger quan-

(Continued on page 23a.)

MILL & LABORATORY FIND

★ ★ ★ ★ ★ ★ ★ ★ ★

Convention Hears 1944's Challenge to the Cereal Chemists

★ ★ ★ ★ ★ ★ ★ ★ ★

FROM THE ADDRESS OF PRESIDENT-ELECT BETTY SULLIVAN AT ST. LOUIS

THERE has been some discussion of the advisability of holding our annual meeting in 1944. Most of you felt that the steadily increasing number of problems made the need of a meeting more acute than ever before. Problems are more readily solved when we have an opportunity for discussion.

The efforts of all scientific organizations are now rightfully directed to the successful prosecution of our war. When humanity is locked in a gigantic struggle with the welfare of millions of people in the balance, chemists should consider first of all how best their particular talents and products can aid our ultimate victory and the solution of a lasting peace.

The expansion of this war to all continents has been paralleled by a widening horizon in our own field.

Looking forward we can see important developments. If we, as individuals, and the American Association of Cereal Chemists, as an active organization, do not prepare ourselves for major contributions to this expanding field, it will be our own loss and a greater loss still to the people we serve.

Unfortunately, there are still mill executives who think of a chemist only as an individual who can run moisture, ash, protein and baking tests and thus assure the firm and its customers of a uniform product meeting certain specifications. Many a man, who started in the field of cereal chemistry with large ideas of future developments he might make possible, has become so bogged down in the mire of routine control that he has neither the enthusiasm nor the time to work out even a part of his earlier dreams. Most of us do too much control work and our energy then becomes too spent to devote to the more important problems which are facing our industries.

Cereal Chemistry's Progress

Cereal chemistry has shown remarkable progress within the past 20 years. Wheat varieties have been tested before being introduced, laboratory milling and baking procedures have become more scientific, and the methods and apparatus for the determination of most of our routine tests have been improved and standardized. Malting and bleaching requirements of flours have become better understood and mechanical dough testing equipment has given us information which before could be ascertained only by feeling rather than by measurements capable of duplication. Undoubtedly, the baking industry is receiving a more uniform flour now than in the past.

In spite of all these advances, only a beginning has been made in the science of cereal chemistry. We know much of the surface, but the fundamental reasons and in many cases the applications of our work still elude us.

More effort should be spent on the selection and the blending of wheats for the mill mix and less on control after the wheat is milled. Give a good miller the proper wheat, and he can make the various grades of flour required without the hundreds of ash, protein and baking tests we do now.

The selection and blending of wheats should be in the hands of the chemists, and we should continue to improve our methods for the evaluation of wheat varieties in order to give the plant breeder accurate information on the qualities needed. Now we know that we must have wheats which possess desirable agronomic characteristics, such as good yield, winter hardiness and resistance to rust in addition to proper baking characteristics. For the latter, we want good volume and reasonable tolerance to mixing and fermentation. These desirable characteristics are foretold by the quantity and quality of the protein of wheat as well as by actual baking tests.

Although we can evaluate some of these factors, the gluten which is in large measure responsible for what we term "quality" is as much of an enigma as ever. Would certain plant growth hormones when applied to the seed improve our wheat? We take for granted, since we have no reliable means of checking taste and flavor, that these factors are developed entirely as a result of the fermentation procedure used, yet unquestionably certain compounds reside in the wheat itself that contribute to taste and flavor as much as the method of handling the dough.

How much do we know about what factors in one wheat supplement those lacking in another? Increasing attention, too, will need to be paid to the vitamin and mineral levels of certain varietal strains as compared with others. These are important not only in considering wheat as a human food, but also to make it a more valuable feed for animals.

When wheat is milled the treatment of the flour so that the proper gassing power and oxidation level is attained is one of the most important functions of a mill chemist. And yet, how, for instance, do we determine the Agene or bromate requirement except by trial laboratory baking tests? These tests may be so far removed from the actual conditions in the shop where the flour is going to be used that too much or too little treatment is given. It should be possible to develop a simple test for oxidation treatment which would tell us how much Agene or other oxidizing agent will prove optimum for definite fermentation procedures and types of bread.

Determining Food Values

It is obvious that the food value of any product in a given diet is of paramount importance, and this, of course, applies to animal as well as human nutrition. With the present surplus of cereals and the shortages of milk and meat, cereals are assuming a larger role in both human and animal diets. In feeding our own people as well as those of the ravaged nations after the war, a greater knowledge of the contributions made by wheat and other cereals is necessary.

There are still many nutritionally important factors in wheat not yet isolated or quantitatively measured. It has been only recently that a few of the numerous "B" complex vitamins have been studied, and their distribution in the wheat kernel determined.

Many other nutritionally important compounds still are there waiting to be found. We know too little about the combination in which certain of these dietary essentials are found. Are certain of the vitamins and minerals present in the bran and shorts in such a form that they can be readily utilized in human nutrition?

The last two years have seen an advance in the enrichment of flours with thiamin, iron, niacin and soon with riboflavin. Methods for the measurement of some of these factors are still not in a satisfactory state, and it is imperative that collaborative work go forward with more zeal than before so that all our laboratories can check within much narrower limits than is now the case. What does it do to our reputations as chemists when thiamin or iron determinations show a maximum range of 100%? Is it because of faulty technique in a few laboratories or are there actually some as yet unknown variables in the methods which need to be properly outlined and standardized? Both mills and bakeries want to add the correct amount of enrichment ingredients, but certainly we should not waste critical materials in such times as these. It is urgent that our methods check more closely, and the main function of the methods committee's work will be directed to that end.

Enrichment Problems

Enrichment has made flour a more valuable food. There are still other equally important considerations in improving the value of our product to the consumer. Recent research has shown that the nutritive value of the proteins of cereals, such as wheat and corn, may be impaired by storage. More work could properly be done on the best means of storing wheat and other cereals to keep them at their maximum value nutritionally.

Wheat proteins are of fair biological value, but would be considered to be the equivalent of meat and milk proteins if supplemented with lysine. If an economical source of lysine could be developed, the addition of this amino acid might prove of inestimable value in the feeding of the undernourished population of Europe and Asia where diets of necessity will be restricted until sometime after the victory. Especially where diets are restricted and limited and where cereals constitute from one quarter to one half of the caloric intake, the better we can make our products the greater our contribution will be to the health of the nation.

In milling there are numerous problems in the tempering of various blends of wheat. Recent developments in the use of quick methods of tempering by the use of steam or nontoxic wetting agents have raised more questions and shown the need for more searching investigations as to the quickest and best methods of conditioning wheat.

We do not want to continue to be primarily an organization of mill chemists. In the future we shall see even greater competition than at present between the cereals such as wheat, corn, oats and the soybean particularly in animal feeding. The proper balance and complementary action of such vegetable proteins are worthy of further study and particularly so now when meat and fish meal products are scarce and we need to raise more cattle, hogs and poultry.

New Products From Wheat

The past year has seen many plants converted to milling grits for alcohol and hence the necessity of obtaining further knowledge on the problems of the distiller. This challenge has been well met by the milling industry. After the war and during periods of surplus low protein cereal crops, it might prove economically feasible to utilize the starch of cereals as a source of many organic intermediates such as lactic acid, glycerol and butyric acid. Bacterial fermentation of starch from the cereals may prove cheaper than present methods of production.

With the multiple products which are already in commercial production from soybeans and corn it is not unlikely that there will be equally attractive outlets for products from wheat. Our present program presents facts to show that the developments just cited are not idle talk but reality.

Nothing has been mentioned of the multiple questions to be dealt with in bakery research but here, too, a virgin field awaits the investigator.

All these vistas lie before us at a time when the manpower shortage in our laboratories is critical and when it is all most of us can do to carry on. None of us has so great a burden that he cannot work on one new problem of interest or think of an explanation for the accumulation of data he has already collected. It is only by the combined efforts of all of us that the science of cereal chemistry will become well integrated and advance beyond our present frontiers.

NEW FIELDS TO EXPLORE

★ ★ ★ ★ ★ ★ ★ ★ ★

Operative Millers Asked to Face Larger Opportunities

★ ★ ★ ★ ★ ★ ★ ★ ★

FROM THE CONVENTION ADDRESS OF CARL W. GRIER AT KANSAS CITY

IN 1913, or just 30 years ago, Kansas City was host to the Operative Millers, then known as the Fraternity of Operative Millers, which was my first convention; and it is paradoxical that now I have the honor of addressing this same organization as one of this year's leaders.

The Association of Operative Millers, started 48 years ago by a few men, is now one of the oldest and strongest of industrial organizations and includes among its membership and associates men from many countries and all phases of work connected with milling. The milling industry, when compared with the rapid expansion and progress of newer processes and industries, is often accused of being old-fashioned; but in looking back over the years, I find we have always met and contributed our share in any emergency.

In years past I imagined there were wonderful opportunities for the Association of Operative Millers for promotional work which would lead to improvements beneficial to our profession and the industry, but now I realize that the pendulum started years ago for the purpose of fellowship and the exchange of technical and practical knowledge has gained momentum each year and has kept our organization equipped and prepared to face any present-day problem. We have a right to feel proud that we are contributing our share in keeping alive and up-to-date one of the oldest and most important of professions.

It is almost impossible to visualize this same group of men confronted with our present-day problems working as individuals and without the combined knowledge, friendships and mutual bonds which are their privilege today, thanks to our wonderful organization.

The era of the "Golden Thumb" has gradually passed and the mill operator of today is a master craftsman, a trained technical and practical engineer, and also a partner with management in all business problems relative to plant operation and profits. With these changing conditions and responsibilities, our most important and sacred duty as an organization and as individuals is to build and train men who will be capable of assuming and carrying on this work on a much wider scope for the mutual benefit of the industry and our association.

In the world of today, when all the principal powers are at war, we hear with increasing regularity such phrases as the "bread basket of the world" and the "ever normal granary" and the production of bread and food is of equal importance to that of arms and ammunition. All the world realizes that it can no longer be taken for granted that there will be sufficient food to carry through this emergency; but the fact that everyone does take it for granted that there will be ample supplies of manufactured cereal products and feeds is in my opinion a wonderful tribute to the milling industry and all connected with it.

In World War I the milling industry was one of the most important industries and the unusual production created by that war brought about many changes in methods, processes and milling equipment. This, however, is infinitesimal compared with changes of today and in the coming postwar period as research and necessity are guiding us into new fields altogether foreign to our old, established milling procedure. Not only are we finding that there are uses for grain products other than food, such as the making of alcohol, plastics, adhesives, etc., but that flour can be improved as an important part of the human diet by adding vitamins and combining with other foods as an over-all basic food. This unquestionably will lead to increased use of our present products which will necessitate changes in our processes and equipment, increasing the value of our organization as a means of keeping abreast of these changes through our bulletin service and our district and association meetings.

The association is to be complimented on the work it has been doing through the years, which has resulted in a membership representing men of outstanding ability from both large and small mills and our allied associates. This has been instrumental in gaining for us full recognition as one of the nation's leading professions. In this work we must thank for their collaboration and help the Millers National Federation, the American Association of Cereal Chemists, mill management, milling trade publications and allied industries that have contributed equally with us in making our meetings and organization a success.

Our membership and financial status has come through this trying year surprisingly well; and for this we are indebted to the district organizations, their officers and the officers of the association who have had an extra burden to carry due to the difficulties of planning this year's meeting and keeping up our standard of good bulletins which hold our membership and make our organization what it is.

I wish to thank personally and for the association, our secretary, Mr. McCraith, officers of the association and district organizations, the many local committees, trade publications and allied trades for the assistance given throughout the year in making our organization and this convention a success.

MANPOWER IN THE MILLING INDUSTRY

By Frank K. Dunn

Regional Information Representative of the War Manpower Commission

From an Address Before the Association of Operative Millers at Kansas City, Mo., June 9

WE now have around 58,000,000 workers in war production, our civilian economy and in the armed forces. It is estimated that the total labor force will probably reach 65,000,000 during the summer of 1943. There will be between 10,500,000 and 11,000,000 men in the armed forces. We will have around 20,000,000 in war production, between 9,000,000 and 10,000,000 in all-year-around farm work, and 8,000,000 in other essential nonagricultural industries. It is estimated that we will have between 23,000,000 and 24,000,000 in all other civilian industries and services.

We are going to need an additional 6,000,000 or 7,000,000 workers who are not now in the labor market. The question naturally arises, "Where are these workers coming from?" We all know that there is plenty of manpower in America. We have more than enough labor to do the job. It is a question of using what we have. Our problem is to get the right man in the right job at the right time.

Some communities have a surplus of labor, while others need workers. It is not a simple matter, however, to move individuals from one community to another. Many problems are involved, such as housing and transportation facilities. The time is rapidly approaching, therefore, when all industries must re-evaluate their hiring requirements, their standards, and use to the fullest possible extent all local labor.

In so far as skilled labor is concerned, we all know that we are just about at the bottom of the barrel all over America. There are few, if any, skilled workers today who are not employed. Especially is this true in so far as the milling industry is concerned.

Our whole war production and civilian economy in a large measure center around the milling industry. It is essential and vital that the milling industry has sufficient manpower and womanpower to carry on. By the end of this year 4,300,000 additional men will have to be taken from civilian life for military service. At the same time, milling industries, munition factories, and other essential industries will require an addi-

. . . *The Operatives' Convention*

AS THIS (the June 9) edition of The Northwestern Miller's Milling Production Section goes to press the Association of Operative Millers is holding its annual convention (June 7-11) in Kansas City, Mo. This renders a complete account of the proceedings impossible in the current issue of the Section, although the June number of its controlled circulation brother, Milling Production, will present a full report, since it goes into the mails around the fifteenth of this month. Section I of this week's issue of The Northwestern Miller, however, contains a telegraphic news account of the Monday and Tuesday convention proceedings, and readers of Section II (the Milling Production Section) are invited to turn there for all the information that is currently available. Subsequent issues of The Northwestern Miller and of the Milling Production Section will contain the rest of the story . . . News reports of the annual convention of the American Association of Cereal Chemists appeared in The Northwestern Miller of May 19 and 26, and a more detailed account, with illustrations, is contained in the June number of Milling Production, copies of which can be had for the asking.

tional 2,100,000 workers, both skilled and unskilled.

The answer to the problem of skilled workers, we think, is in the hands of industry largely through in-plant training, upgrading of workers, and the fullest utilization of skilled workers. As a result of the War Manpower Commission's training programs, such as Training Within Industry, Apprenticeship Training Services, and In-plant Training, thousands of workers are being made available for more important jobs. Pre-employment training outside of war plants is now being provided to more than 160,000 persons monthly throughout the country. Thousands of those who have completed training courses are now making a greater contribution to the war effort. Then, too, more than 6,000,000 workers in 6,500 plants are receiving in-plant training on the job.

We have more than 1,500,000 men and women about 65 years of age who are able to enter the labor market and are not now working. There are many jobs that these older workers can do just as well or even better than younger workers. Then we have the minority groups with more than 1,500,000 available potential workers.

We all know, of course, that the largest untapped labor supply is to be found through women. It is estimated that one third of the total labor force in 1943, excluding the armed forces, will be women. We now have 4,000,000 engaged in war production and it is estimated that during 1943 about 2,000,000 additional women will enter war production, not including those required as replacements. It is safe to say that nearly 18,000,000 women will be employed in all types of work by the end of 1943.

It is the policy of the War Manpower Commission to promote part-time employment of women, especially in necessary civilian activities where there is need for them. There are approximately 12,000,000 women, both white and colored, between 18 and 44 years of age in the United States who are not now in the labor force and who do not live on farms. Many of these will be entering employment for the first time this year. A prediction that, eventually, 50% of war workers will be women is regarded as not "overshooting the mark."

The United States Employment Service has been instructed to recruit workers for all employers, whether engaged in war work or not, to the extent possible with its available staff. This new ruling modifies the policy which has been in effect since last June when the United States Employment Service offices were authorized to refuse service to less essential employers and to concentrate exclusively on getting labor needs in war industries and other essential activities. This new ruling means that any employer, regardless of his line of business, may now apply to the United States Employment Service for workers. We believe that the resumption of placement service to less essential employers will put the United States Employment Service in a much better position to utilize all available workers and assist all employers in making the manpower adjustments required by the war with the least possible disruption of our civilian economy.

Close contact with the less essential employers will enable the United States Employment Service to facilitate the transfer of workers with critical skills to war industries and at the same time make certain that the employer in a service trade or industry retains an adequate force. We want to make certain that the essential war industries get the workers they need without stripping activities necessary to our civilian economy. The United States Employment Service offices can help less essential employers find necessary replacements or make other adjustments which will permit efficient operation.

A source of labor supply in which you are vitally interested may be found through the elimination of accidents. More than 47,000 American workers were killed last year; over 4,000,000 were injured, while 460,000,000 man days were lost. Forty-four thousand workers were injured each week last year. The total number killed or wounded on the home front, in industries, on the highways and in home accidents was seven times as great as those killed in the armed forces. We all have a real job to do in accident prevention.

We believe that employment stabilization programs will increase manpower greatly through reduction of labor pirating, labor hoarding, job shopping, immigration and absenteeism. It is well to point out that these employment stabilization programs have been worked out by area manpower committees representing both labor and management. The War Manpower Commission has approved the plans and put them into operation. No plan has been adopted where there was not universal agreement between labor and management as to the points which the plan should cover. We have discovered that where employment stabilization plans have been adopt-

(Continued on page 22a.)

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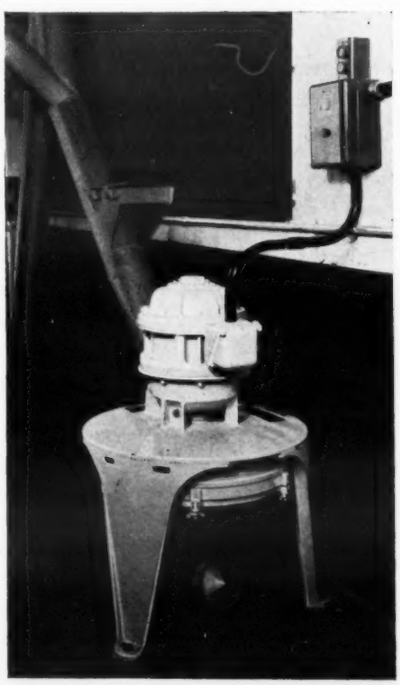

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CONTINUOUS DESTRUCTION OF ALL INSECT LIFE

Development of Separating Machines

By the Superintendent Emeritus

THERE has been little consistency in the development of mechanical contrivances through the ages, and this is as true of milling as of any other branch of industry. Undoubtedly the utilization of rotary motion in the crushing or grinding of grain was among man's first efforts toward mechanization as a means of meeting the necessities of a growing civilization, but the rotary movement was then, as now, in reality a medium by which linear motion acquired something like continuity.

The earliest grain separating practice consisted merely of throwing a small mass of berries up into the air and allowing the wind to blow the chaff to one side, and such practice is evidently not entirely obsolete today.

Very early in history separations involving the principle of difference in specific weight were made, and the motion employed (and furnished by hand) was identical with that of modern gyratory screening or sifting machines. To give a hand sieve this kind of motion seems to be instinctive, and probably long before there was such a thing as a sieve it had been learned that objects such as sound berries of grain would sink toward the bottom of any sort of pan or vessel swung in a circular manner, forcing chaff and bulkier materials to the top, where they could be "skimmed off," so to speak.

SHAKERS

With the further development of mechanical contrivances, and especially after the utilization of power other than that supplied by animals (human beings included) became common among the more civilized peoples, it appears that the approved method of making separations, both of foreign substances from grain and of shriveled and parts of broken berries from other parts, incorporated reciprocating motion, or plain shaking back and forth. In his book, "Flour Milling," Peter A. Kozmin describes a German mill which was in use up into the fifties of the Nineteenth Century. No details of the grain cleaning equipment are given, but it is stated that the product of grinding on a pair of millstones was sent to a woolen sifting bag.

This bag seems to have been made in the form of a fairly large tube of considerable length, but it was not rotated, like a reel. Instead, it was shaken, and the reciprocating, or vibratory, motion was imparted to it by means of a small cam wheel.

Half a century or more earlier than the date at which this establishment was said to be in operation, reels were being extensively used for separating the particles of ground grain as well as for grain cleaning. In the designs of mills by Oliver Evans included in "The Young Mill-Wright and Miller's Guide," Seventh Edition, 1832, reels are used exclusively. Not even the shaking shoe for feeding the grain to the stones was employed, although such a device, actuated by a cam arrangement similar to that described in connection with the sifting bag, had been used before.

Evans invented a reel separator for cleaning grain and provided aspiration by means of air currents passing through the falling berries. He even devised a double-reel "rolling screen," the inner cylinder scalping off rubbish and perhaps some coarser grains and dropping the berries through to the outer cylinder, the meshes of which were smaller than the wheat. In this arrangement there was a fan for making a separation of lighter materials from heavier, but the set-up differed from that used later, and at present, in that the separations were made by blown air currents instead of by inducing currents of air through the grain and to the eye of a fan.

The essentials of a "rolling screen" are a cylindrical screen, either perforated metal or woven wire, and means for mounting and rotating it. A plain reel of similar construction but clothed with wire or silk cloth may be used for making separations of the ground products as well as of the berries of grains and other substances. Such were used ex-

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tensively in the past, but sometimes for scalping stocks and for separating grains a hexagon form was adopted.

In the reel, or rolling screen, the material is acted upon by the force of gravity, and if nothing interfered, each particle would move straight down, or toward the center of the earth. But free motion in that direction is not possible for two reasons. If the screen is stationary, the particles will either rest upon the solid metal or will be largely kept away from the openings by other particles seeking the same path. A sort of arch forms above each hole, and none of the particles helping to form it can move because of the others. This being so, the screen is made to move—in this case in a continuous curvilinear manner. The purpose is to remove the metal barrier from between the particles and the center of the earth, but since they are in contact with the metal, its movement imparts motion to them. Thus the mass is carried along and upward. It is apparent that particles near the bottom of the cylinder (or hexagon) may pass readily through openings a little larger than their smallest dimension if a free lane is made for them.

If the grain being cleaned is wheat, and the process intends to scalp off particles larger than wheat berries, wheat, weed seeds, sand, etc., may pass through, as will also a good many oats, if they are present. Corn, sticks and "white-heads" (unthreshed "ears" of wheat or rye or barley) will ride upon the inner surface of the screen, or sieve, and move slowly toward the outlet end (the "tail") of the machine. They will, of course, tend to keep smaller particles, whether wheat berries or weed seeds, from reaching the screen, because they occupy a considerable part of the surface themselves.

The old "rolling screen" appears to be virtually obsolete in the grain cleaning department of milling, but a different arrangement of the cylindrical screen as a scalping and separating medium is in wide use at the present time in connection with some of the most modern equipment.

Separations by virtue of differences in the specific gravity (weight in ratio to size) are usually made in connection with screen or sieve separations in the cleaning of grain. An essential is a screen or a multiplicity of screens mounted on frames and arranged in a "shoe" in such a way that reciprocating motion can be set up. This motion may be in line with the travel of the grain or at right angles to it. The "tail" of the screen is a little lower than the "head," and the shaking motion induces movement of the mass from head toward tail.

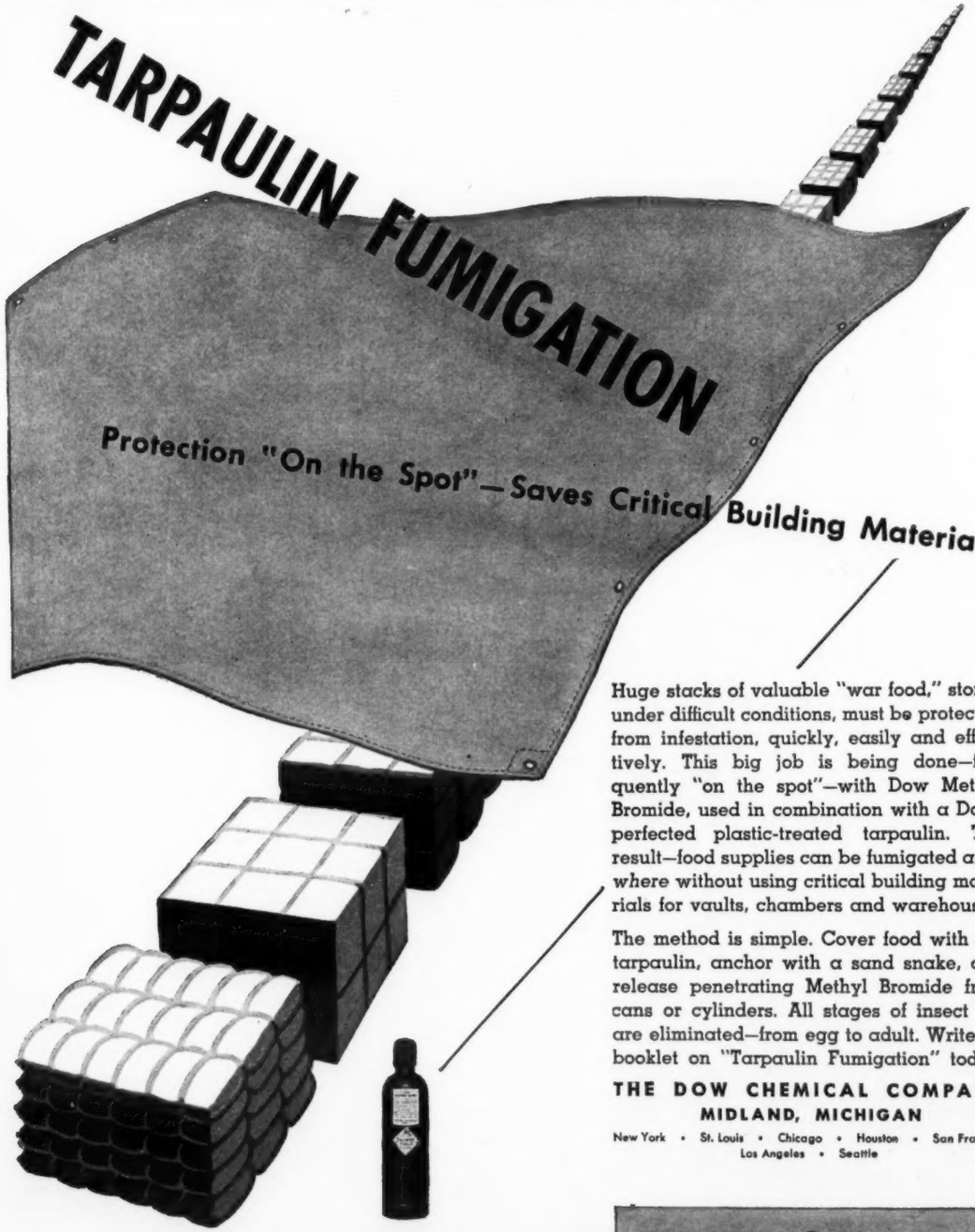
RECIPROCATING SEPARATORS

As in the case of the rolling screen, the movement of the particles is influenced by the movement of the sieves, but the behavior of these particles in connection with action of shaking screens is quite different. The purpose of the movement is, practically, to jerk the metal comprising the solid parts of the screens from beneath such particles as may be resting on them.

With a screen perforated to permit the passage of wheat berries but no particles whose smallest dimension is greater than that of wheat, all wheat should pass through and all sticks, oats, corn, "white-heads," etc., should tail over. But if the holes are made so small that only wheat berries of average size could possibly get through them, capacity will be sacrificed. Again, because some side movement is inevitably imparted to the berries on the screen, the holes must be made large enough to allow the passage of the particles as they move at some slight angle from the perpendicular. This arrangement makes for capacity, and it is usual to provide screens with openings just sufficiently large to handle a load equal to the rated capacity of the machine. The relatively large holes, however, encourage the passing through of oats and sticks, since these may have a smallest dimension not as great as the average wheat berry, and although there is a tendency for them to lie flat on the screen, just a little tipping as the screen moves back and forth gives the pointed ends of oats an opportunity to start through. Once started, they will continue.

MOMENTUM

The particles of matter—berries of grains, weed seeds, sticks and stones, and so on—involved in grain separation acquire "momentum" when a force sets them in motion. This is properly "the inertia of momentum," and extremely intricate calculations might be made in connection with the phenomenon. It is easily understood, however, that a baseball thrown with force would travel in a straight line indefinitely if no other force acted upon it. That a pitcher is able to make a ball "curve" does not disprove this law. A curve deviates from a straight line merely because the ball is so thrown that one side of it meets with less air resistance than does the other. Gravity, of course, pulls it



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downward, and if it does not drop even a little below a horizontal line from the pitcher's hand to the catcher's mitt it is either because it was compelled to curve upward by the same force that would make it curve inward or outward or because the straight line it would have followed except for the pull of gravity was at a slight angle above the horizontal.

Any body in reciprocal motion must come to a complete stop at the end of each stroke, and because it is possessed of inertia of momentum, something has to absorb the stored-up force. With the baseball, the catcher's mitt usually does it (unless a batter is able to beat him to it and clout out something that may be a hit), but in the case of a machine reciprocated by means of a crank-shaft or eccentric, the framework —and finally the building itself—must take the blow. Late developments in machine design do away with crank-shafts and eccentrics in connection with reciprocating machines and utilize the inertia of momentum of rotating weights to impart the required motion to the reciprocating screen or sieve.

Indentation cylinders are frequently called "trieurs" in European countries. Trieurs generally are said to be based on the principles of a device credited to a Frenchman named Vachon, dating from about 1844. This principle has been described as follows by a German, Dr. von Rechenberg. Writing for the milling journal, *Die Mühle,* Dr. von Rechenberg has this to say:

"The principle of the 'trieur,' or indentation cylinder, is an ingenious one because of its very simplicity. Kernels of the same diameter but of different shapes cannot be separated from each other by means of sieves; therefore the sieve is, so to speak, cut in two. Instead of letting the kernels fall through the sieve apertures, these apertures are closed at a certain distance from the surface of the sieve, forming cells, or pockets, in which only kernels of one shape can be accommodated, while kernels of other shapes will project from the pockets and can be removed easily. It remains only to bring about the emptying of the pockets filled with the first type of kernels in such a way that the material removed from them will be separated from the other material, and the separation is complete. This is the basic principle of all trieurs. The difference between the various types of construction lies in the way in which the emptying of the pockets is accomplished."

Dr. von Rechenberg calls both the disc and the reel-type indentation separators "cylinder" machines, considering the disc as a solid cylinder of small length with indentations in its end surfaces. Generally, however, the disc type is so called, and there seems no good reason for doing otherwise. O. Haltmeier, in a contribution to *Die Mühle,* differentiates between the disc and the cylinder trieur by calling them such. In the contributed articles mentioned, Dr. Haltmeier sets forth the principles upon the control of which the modern high-speed cylinders are based.

The low speed cylinders, commonly called "cockle cylinders" in Great Britain and America, did not make use of the control of the two significant forces acting upon the materials being operated upon. Von Rechenberg calls centrifugal force the obstacle to maximum efficiency in connection with cylinder machines. Yet the facts seem to be that modern cylinder machines using indentations have taken advantage of the principle of design which controls centrifugal force in relation to the force of gravity with the purpose of utilizing a greater area of the inner surface of the cylinder for accomplishing separations.

Without resorting to the use of complicated formulas, sufficient information concerning the action of the newer-type cylinder machines may be obtained from a simple consideration of well-known results of the action of centrifugal force. Probably most of us have, as boys, fastened an old nut or some similar object at one end of a short string, held the other end, and set the object to describing a circle on a vertical plane. Or a small bucket of water may have been used as a weight, and probably the first time any boy ever saw the thing done he was a little amazed that the water didn't fall from the bucket when it was bottom upward. Probably, also, at some time many of us saw the demonstration end ingloriously because the demonstrator failed to keep the pull of centrifugal force greater than the pull of gravity. The performance is not hard to begin, but the performer must know how to lessen the pull of gravity by changing the plane of rotation from the vertical if all the water is to remain in the bucket until it comes to rest.

It will be understood that the size of the indentations in cylinder machines determines the size and shape of the particles carried up and thrown into the trough. When cockle and seeds of similar size and shape are to be taken out of wheat the indentations "select" the seeds and reject the wheat; when the materials to be rejected are oats, barley, whiteheads, corn, sticks, etc., the indentations are adapted to the selection of wheat berries, as in the upper cylinder. Wheat berries of differing

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sizes can also be separated by this selection-rejection method.

Multiple cylinders, each adapted to select or reject particles of different sizes or shapes, are in wide use at the present time. Multiple machines utilizing cylinders within cylinders have also been developed and are playing an important part in both the separating of unwanted materials from wheat and the grading of wheat by size.

The "Carter Disc" separator, well known and extensively used not only in North America but throughout the milling world, was introduced in the early 1920's. A number of discs with indentations, or pockets, in both sides revolve on a horizontal shaft which runs through the body of the machine. Materials to be separated are introduced. The pockets in the faces of the discs are "selectors," and certain of the materials making up the stock are selected and carried around until a combination of gravity and tangential tendency discharges them into little troughs set between the discs.

DISCS AND POCKETS

The discs are in reality wheels with spokes, although the sides of the rims are wide in proportion to the diameters of the discs. The spokes perform an important function, however, because they are formed as angled blades. They serve the purpose of a screw conveyor, but they are greatly modified in form. Their movement is rather slow and their "pitch" relatively small. Since they do not extend to the bottom of the "box" which acts as a receptacle for the bulk of the grain, they move only the upper part of it, from the head toward the tail. The rejected materials (when oats, barley, etc., are being separated from wheat or rye) thus move along the top of the grain mass and are discharged at the tail end, high up on the end of the casing, while the selected grains (wheat, for example) are discharged from the pockets into the little troughs, as before mentioned. With discs intended to remove cockle, flax, wild peas, and so on—materials shorter than the berries of wheat although their diameters may be as large—the wheat is "rejected" by the pockets. The weed seeds, cockle, etc., are then picked up by the pockets and discharged into the troughs, while the wheat is pushed along by the blade-spokes and discharged at the tail, or more often into the head of another section in which the other separation is made. Discs pocketed for either purpose may be suitably mounted on the same shaft, and the separation of wheat from oats, barley, and so on, as well as from cockle and weed seeds of various kinds, is easily accomplished by the use of one machine.

As before stated, the "Carter Disc" machines contemplate the discharge of the "rejected" materials—whether it is cleaned wheat from which cockle, etc., have been removed or oats, barley, weed stems, and so on, from which wheat and shorter particles have been picked out—at a point well up on the tail plate. When machines are built to make two distinct separations, as cockle from wheat and wheat from oats, etc., the cockle and seed are separated from the wheat and oats mass first. Cockle and seeds are discharged near the head end, from a hopper into which the troughs receiving small particles empty themselves. A screw conveyor is provided to carry back the discharge of the troughs from tail-end discs to the head, since when working at high capacity these separations are often incomplete. In machines intended for small mills a re-treatment section is often provided. This section consists of a few discs which make a separation called "re-treatment."

Milling 60 Years Ago

A System of Grading Middlings

● **By Louis H. Gibson** ●

EDITOR'S NOTE.—**This article is reproduced from Mr. Gibson's book, "Gradual Reduction Milling," published by THE NORTHWESTERN MILLER 60 years ago. Times and milling have changed, but Mr. Gibson, pre-eminent in his day as a technical milling writer, recognized and discussed milling fundamentals that do not change. Read with this and the lapse of years in mind, present-day millers will find much to interest them in the chapters from his renowned volume which currently are being reproduced in the columns of this journal.**

THE grading of middlings, previous to purification, is worthy of serious consideration. In past years this grading has, for the most part, been done on reels. On the system which will be here described, the grading will be done on sieves or shakers. By this means the middlings are graded without making dust—at least, there is less dust than by the other methods, and then there is the purifying effect of the sieve action. The value of this sieve action is largely underestimated. Its action is more potent than it is credited with being. It has more to do with the purification of middlings than do the currents of air, as provided for on the ordinary form of purifiers independent of such action. By the swinging hand-sieve motion, the impurities are left on the top, and the heavier middlings are next the cloth. This motion has the effect, in a modern degree, of constantly lifting and tossing the stock on the sieve. The middlings being heavier, they fall next to the cloth, while the light impurities are above, and thus are finally passed over the tail of the sieve. All this presents another good feature of sieve graders.

The best grader known is one long sieve or more. It does not make as much flour as a reel grader, and at the same time it has a purifying action, because of the sieve motion. A sieve 40 inches wide and 20 feet long will do all the work of grading for a 250-bbl mill. Such a grader is a very simple affair, and very easily made. It should have an inch throw on the eccentric, which should be speeded at about 350 revolutions per minute. The frame of the sieve proper should be supported on hickory springs, which should be about three feet long.

As to the grading of the middlings on this machine, assuming that they have been dusted over a No. 9 cloth, and the whole body, coarse and fine, has been run to this machine, the following clothing suggests itself:

4 3 2 0 00

This does not necessarily mean that there will be this number of grades of middlings to be purified, but they are divided in this way in order to derive the benefit from aspirators (one of which is used for each grade), which are set under these graders. One aspirator, or a single leg thereof, is used for each grade of middlings. After these middlings have passed through the aspirators in the number of grades as indicated, they may be spouted together into a smaller number of grades, and from thence to the purifiers. The 4 should form a grade by itself, the 3 and 2 another, and the 0 and coarser a third. The first two grades it would be well to purify on the ordinary sieve and suction machine, and the coarser middlings on an aspirating purifier, of the pattern similar to the Gray, Worner or other machines of that class. This is the least number of grades which the writer would suggest for a mill which intends to compete with the ordinary run of merchant mills. There will be still another grade of middlings from the sizings.

As to the number of purifiers required, two for each grade is the least number which may be suggested for mills of the class named.

The practice of putting many different sizes of middlings on such a machine is fatal to its successful operation. There are more machines running which are clothed with No. 9 or other fine numbers at the head, and No. 2, 1 or 0 at the tail, with intermediate numbers between, than there are with better clothing. As the separation as to specific gravity is dependent upon the difference between the specific gravity of the middlings and the impurities, and as each size of middlings has an accompanying quantity of impurities of the same size, there will be as many grades of impurities, and as widely varying in specific gravity, as there are different sizes of middlings on the sieve. Therefore, where the range is as wide as mentioned, the currents of air cannot be adjusted to meet the specific gravity of the various impurities and at the same time allow the middlings to take their desired course. For example, the specific gravity of the impurities of the coarser middlings may be as great as that of the finer middlings regardless of the impurities. Thus, a current of air which was adjusted to take out the lighter impurities from the coarser middlings, would take with it the fine middlings themselves, thus resulting in waste.

It will be seen that it is important that only middlings of approximately the same specific gravity should go to a machine. There should be different machines for the different grades. This will suggest that the machines should be small and numerous. With the gravity separator, where the middlings are not subjected to the action of the air until they have passed through the sieve, the number of different sizes is not so important with reference to the sieve, but very important as to the uniformity of size of the particles fed into each leg. It is one decided advantage for this form of purifier that it grades the middlings with exactness before they are submitted to the action of the air, and as the difference in specific gravity is greater between middlings and impurities of the same size than it is with the varying grades of middlings and impurities before mentioned, the separation is sure to be more exact than it is possible to have it by other means.

——BREAD IS THE STAFF OF LIFE——

"Where the roll has too heavy a feed the yield of middlings from the wheat cannot be so large as under more favorable conditions. With a heavy feed the product of the roll takes more of the nature of a conglomerate. The flour and middlings are forced into the particles of wheat rather than separated from them, as they would be with a lighter feed. In this way the separating machinery, or subsequent reduction machinery, cannot do its work so well as it should. The deleterious material from the wheat will be more intimately mixed with the desirable middlings or flour portions. The former will be soft and flat. The bran will be lumpy and unevenly cleaned. There will be a part of it that is cut up as fine as sawdust, another that is clean, and the remainder which is rich and unfinished. Where there is this kind of bran—that is, unevenly finished—it shows that that part of it which is overfinished—cut up—must have been cleaned or finished on a previous reduction, and the product of low grade material, which naturally belonged to the last reduction, went in with a higher grade of flour of the other reductions. On the other hand, the lumpy and unfinished bran indicates that there were higher grades of stock taken from it at the last reduction or reductions than naturally belonged there. All this may be the result of overgrinding, which means carrying too heavy a feed. . . ."—Louis H. Gibson in "Gradual Reduction Milling."

THE PARADE OF THE PIONEERS

★ CAPTAIN ROBERT GRAY—1791 ★

In 1791 Captain Gray was in the North Pacific aboard the Columbia, a trading vessel which the year before had circumnavigated the globe.

Searching among the coves and inlets for Indians with whom to trade for furs, Gray discovered a mighty river and named it after his ship, Columbia. Fourteen years were to elapse before Lewis and Clark were to demonstrate that this wild country could also be reached overland.

The State of Oregon ranks Captain Gray as one of its pioneers who set its future citizens a mark for skill, perseverance and courage.

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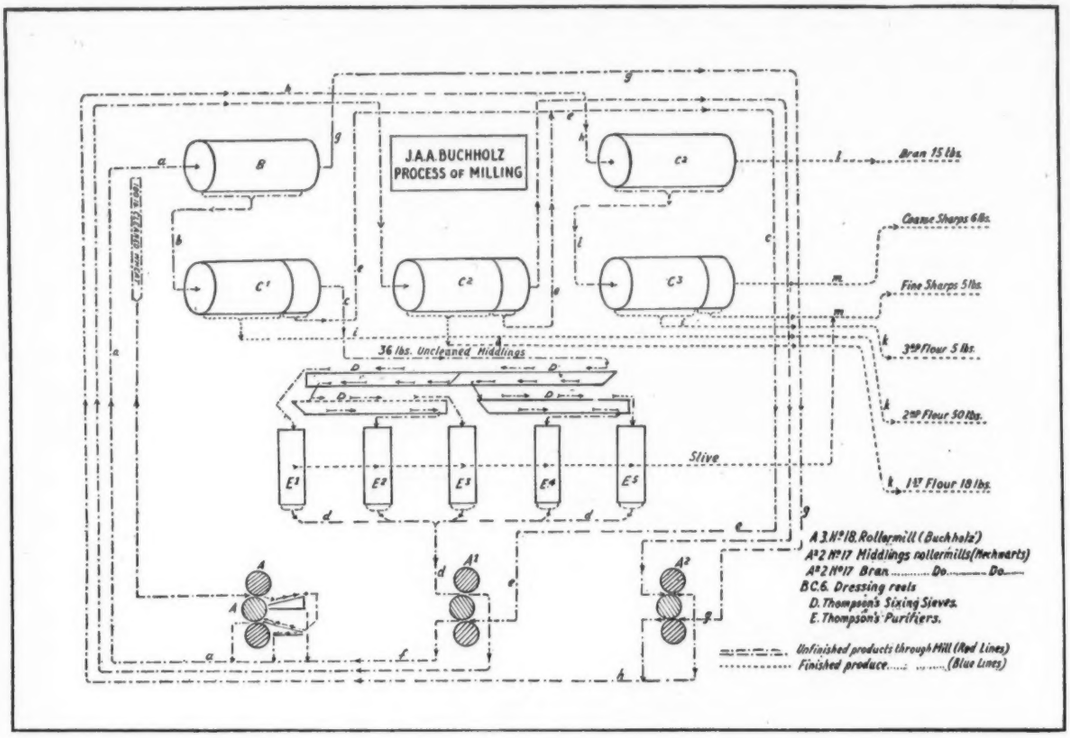
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3rd Flour 5 lbs.
2nd Flour 50 lbs.
1st Flour 18 lbs.
36 lbs. Uncleaned Middlings
Sieve
A 3 No 18 Rollermill (Buchholz)
A 2 No 17 Middlings rollermills (Nechwarts)
A 2 No 17 Bran ..... Do ..... Do
B C 6 Dressing reels
D. Thompson's Sixing Sieves.
E. Thompson's Purifiers.
Unfinished products through Mill (Red Lines)
Finished produce ..... (Blue Lines)

THE ORIGINAL FLOW SHEET

THE flow sheet is the *vade mecum* of the miller and the milling engineer. It is what the Bible is to the theologian, and Shakespeare to dramatic art. The planning of a mill would be a sheer impossibility without a flow sheet. It provides a common meeting ground between the miller and the milling engineer, where each can give vent to his feelings, or imagination if you like it that way. It also prevents some of us from running amuck in an effort to plan a better mill, though we must have pioneers who are prepared to make bold experiments and risk their reputation on the outcome. As a fact, it is rather sad to think that the number of these adventurers is dwindling, possibly the result of the modern tendency to think of the commercial aspect before the making of technical history. In passing, it is interesting to note that the majority of the innovations in the process of flour milling has emanated from the brains of millers.

The individual responsible for the introduction of the flow sheet was a Hungarian miller-engineer, John Auguste Arnold Bucholz, a son of Gustav Adolph Bucholz, who introduced the roller process into this country in 1862. Bucholz, junr., conceived the idea of the diagrammatic flow sheet. Of course, there may have been others who tried their hand, but Bucholz was the first to put the idea into practical form. He obtained official recognition as the inventor by reason of Patent No. 5308, granted to him on Dec. 29, 1879, for a process for converting wheat into flour, etc., at one continuous operation.

Bucholz, senr., had played a great part in the introduction of the roller process, being granted patent No. 2205 in 1862 for a roller mill. It was, however, left to Bucholz, junr., to further a proper understanding of the principles of grinding, separating, purifying and dressing, etc., and, in doing so, he evolved the diagrammatic flow sheet, upon which he explained his ideas and indicated the various amounts of stock he expected his system to produce.

Previous to the introduction of the roller process, the operation of making flour was simple in the extreme, the wheat being ground by millstones and the rough bran separated away by means of a sieve or reel, etc. This simple method did not require a diagrammatic flow to indicate the lines upon which it should be carried out. The roller process was more complicated—there were many rollings and separations, etc., both for purifying and dressing out the flour—and before this system could be properly understood or appreciated, some plan had to be evolved. Bucholz put all the machines he employed on paper, and connected them together by lines to show his method of communication. Thus, he devised the original flow sheet and made a discovery of the first order. Bucholz was so impressed that he took immediate steps to protect his idea by patent.

Bucholz's discovery paved the way for a better understanding of the principles of the roller process, for by the aid of his diagrammatic flow millers were, for the first time, able to grasp the underlying principles governing the production of flour by the new methods.

The Bucholz flow was very simple. It was planned to deal with 100 lbs of wheat per hour. He employed grooved and smooth rollers at differential speeds and sieves for grading the various products for purification, etc. He clothed his centrifugal dressing machines with No. 11 silk and obtained an extraction of about 73% flour, 11% sharps and 15% bran, allowing 1% loss. He stated the speeds of the rollers to be 250 r.p.m. and the diameter 8½ inches.

It is strange to relate that the use of iron rollers for grinding and crushing grain, malt, etc., was practiced in this country for 120 years before the advent of the roller process of flour milling. The first record relating to the use of rollers in this country was in 1753, when one Isaac Wilkinson was granted a patent No. 675 for making cast metal rollers to crush grain, corn, malt, etc. In view of this, one is tempted to ask why they should have remained unadopted in the manufacture of flour for so many years.—*By "The Scribbler," in Milling, Liverpool, Eng.*

Protein and Flour

A HIGH percentage of protein in the mill-mix is not always a desirable flour characteristic, even when it represents gluten of high quality. Such a situation is a serious problem only in connection with blending, however, for high protein wheats capable of yielding high quality gluten are so rare that they command rather high prices. They are usually worth all they cost to the miller supplying bread flours to commercial baking establishments, for if the flours they yield when milled alone are too strong it is an easy matter to substitute sufficient quantities of "weaker" wheats—that is, wheats carrying less protein—to get the required strength. On the other hand, if the flours required need only a low or moderate quantity of high quality gluten, the miller would have no incentive to buy high priced high protein wheats. Under such circumstances the problem sometimes is to avoid wheats in which high protein berries are mixed. The types of flour under consideration would not be benefited by more than a moderate amount of even the highest quality gluten, and it can safely be assumed that the hard, vitreous berries in parcels of soft red wheat, for example, are worth less—to the buyer, at least—than are those running true to class.

Millers of soft wheat flour are ordinarily less concerned about the protein content of the mill-mix than are those milling bread flours. Chiefly their interest is negative. If their wheats are principally of the soft red varieties there is not much danger that the weaker and inferior varieties of the hard reds—those which are actually more yellow than red—will get into the mill-mix unnoticed. Here common sense observation is worth much more than any estimation of protein quantity. It is true that protein determinations can profitably be used as insurance against too much "strength," and that they will also reveal undesirable weakness, but as has already been suggested, it is certainly not as difficult to distinguish undesirable characteristics in a soft red wheat as in the hard wheats destined to produce flours acceptable to the commercial baker.

All bakers do not want flours of equal strength (that is, with equal percentages of protein). Usually, however, the miller making such flour is required to meet certain definite specifications which include protein percentages. He cannot merely meet these, however; in addition he must exert the greatest effort to insure against undesirable properties not revealed by the protein estimation. These are not concerned wholly with the gluten quality of the flour; they have to do with properties more or less indefinable but best described in the language of the operative miller under the general head of "quality." Precautions must be taken against various types of "unsoundness," including mustiness, immaturity and heat damage—even the slight heat damage often ignored in grading, such as is revealed by darkened and brittle germs. Whether facilities for pre-milling are provided or not, a tentative blend should be made up, employing the best judgment possible with all information at hand as a basis.

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FANS AND THEIR APPLICATION

By W. J. Oonk

MOST of us think of fans as something of relatively recent origin, say around 1900. However, the industry is much older than that, as the first fan built by B. F. Sturtevant was made about 1864. At that time Mr. Sturtevant was working on a machine to make shoe pegs and was having difficulty with the quality of his product due to interference of sawdust and chips. It was in this connection that he built the first fan, which is very similar to the standard planing mill exhauster as we know it today.

We also think of some other fan applications as being of very recent date, such as air conditioning of public buildings, railway air conditioning and tunnel ventilation. The Allegheny tunnel, which is a railway tunnel about 3,000 feet long, was ventilated in 1900. The first railway car was air-conditioned in 1910. The first commercial comfort air conditioning job was the Pompeian Room of the Congress Hotel in Chicago, installed in 1911.

There are two general classes of fans in use today—the axial flow type and the centrifugal. The axial flow fan is the type in which the air flow is parallel to the shaft of the fan, and the centrifugal is the type where the air enters the center of the wheel and is discharged radially into a spiral casing, where it is expanded and discharged at right angles to the path of entrance.

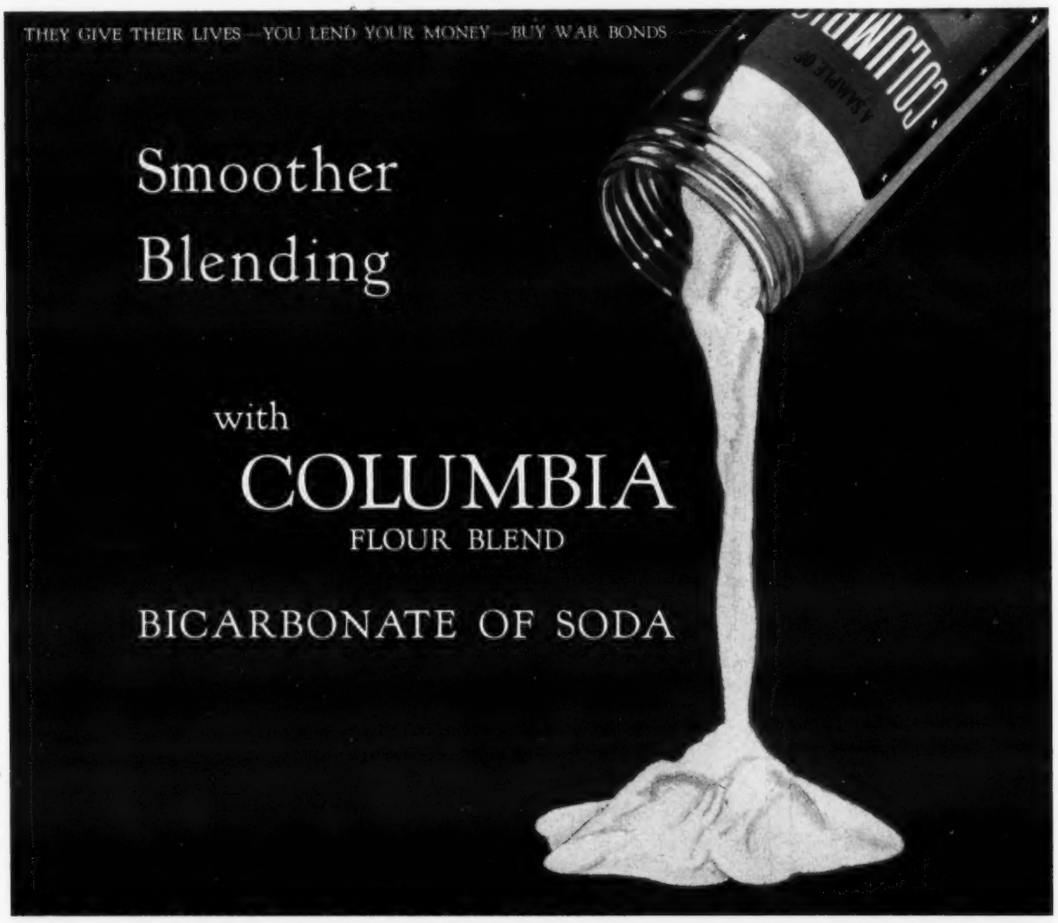
The axial flow fan is built in many variations, from the two blade airplane type propeller to those having as many as 20 blades, with the more popular designs having three to six blades. These fans are used primarily to discharge air from one room or space into another without any appreciable differential in pressure. During the past four or five years considerable development has brought the axial flow fan into the range of pressure ordinarily reserved for centrifugal fans. Our company has been offering a fan of this type for use up to 1½-inch static pressures for several years, and is now building one for the exclusive use of the navy which operates against pressures up to 60 inches of water.

Centrifugal fans are generally divided into three distinct types—the radial blade or steel plate type, the forward curved blade, and the backwardly inclined blade. The steel plate fan wheel is regularly built with six to eight blades, the forward curved blade fan, except for the very small sizes, is usually furnished with about 60 blades, and the backwardly inclined blade with 8 to 12 blades.

The radial or steel plate fan is the most widely used industrial fan and is used mainly in the handling of dust-laden air or for material handling, such as shavings, sawdust, corn, wheat, flour and many other products. The wheels of these fans vary slightly for different applications. The long shaving or open type wheel is used for long, stringy materials. The same wheel with side plates is used for handling of materials which are not too large and are not stringy. The cone or back plate type wheel is generally recommended for handling fibrous materials such as cotton or wool.

Another variety of this fan is made for high pressure work. It differs primarily from the planing mill exhauster in that the casings and wheels are narrower, thus producing much higher pressures for a given volume of air. This type of fan is generally used for forge blowers, primary air to oil, gas, and pulverized coal burners. The steel plate fan is also used as a high temperature fan for handling air or gases at temperatures from 300 to 900°. For higher temperatures, say up to 1,400°, the fans are of special alloys and special construction. Today these fans are provided with ball bearings instead of water-cooled bearings. The heat is removed from the fan shaft by cooling wheel placed between the fan housing and the first bearing. We thus avoid the trouble from freezing and stoppage of water lines.

The forward curved blade fan has been in general use for some 30 years now and is the most widely used of all fans in general ventilating work. Due to the large number of small curved blades, the use of this fan is generally restricted to handling relatively clean air. There are many installations of fans of this type handling dirty air, with the result that they require fre-



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quent cleaning to keep their air delivery up to designed conditions. This fan has the advantage of being slow speed and, when properly selected, is the most quiet fan, making it especially desirable for use in churches, schools and various types of auditoriums where quietness must receive prime consideration. Another advantage of this fan is that it takes up less space for a given volume of air than the other types. Due to its relative flat pressure curve throughout the range of good efficiencies, it is not suited for parallel operation.

The fans in most of the warm air furnaces, high velocity unit heaters, unit air conditioners, and small direct connected ventilating sets are of this type. It is also a very popular induced draft fan for rather simple boiler installations where the operating pressures are low. It is undesirable on induced draft work where we get a combination of high speed of the wheel and fairly large quantities of fly ash in the gases. Under these conditions the erosion is very severe, causing high maintenance cost.

During the past 15 years the backwardly inclined blade fan has come into very wide use because of its relatively steep pressure curve and its nonoverloading characteristics. With this fan, it is possible to predict in advance the maximum possible horsepower for a given speed, regardless of the pressure. Thus on jobs where it is impossible to predict or calculate the pressure drop accurately, you can definitely select a motor size for the fan speed and be sure that it will not be overloaded. With the steep pressure curve you get relatively small changes in volume for variations in static pressure. On many jobs it is impossible to estimate accurately the static pressure, and on other jobs, such as air conditioning jobs, you get variations in static pressure due to the opening and closing of dampers in the branch ducts.

This fan is widely used today on general ventilating work, air conditioning systems of all types, industrial fume exhaust, high temperature industrial fans up to 900° F., forced draft fans for all types of boilers and stokers, and induced draft fans for either gas or oil fired boilers.

The total pressure of a fan is the rise in pressure from the inlet to the outlet as measured by two impact tubes. The velocity pressure of a fan is the pressure corresponding to the average velocity at the fan outlet. The static pressure developed by a fan is the total pressure minus the velocity pressure.

It is this static pressure which we all use in selecting a fan for use on a given system. In other words, it is the pressure developed by the fan to overcome the resistance of a given system to the flow of air. When a fan is a part of a definite duct system and we find it necessary to increase the air volume, the important things to remember are: That the volume of air delivered by the fan varies directly with the speed change, the static pressure varies as the square of the speed change ratio, and the horsepower varies as the cube of this speed change ratio. For example: If we double the speed of a fan we get twice the air volume, four times the static pressure, and eight times the horsepower. It is important to remember that the above applies only when there is no change in the system. If there is a change in the system, it is necessary to recalculate the static pressure on the basis of the new volume to be handled and refer to the fan performance tables for the new speed and horsepower.

In the selection of the fan for a given duty, it is necessary to first select the proper type of fan and then to select the proper size. Where quietness is an important factor, it is important to stay below outlet velocities which are known from experience to be satisfactory and to keep the efficiency as high as possible without getting too close to the peak of the static pressure curve. If a fan is too small for a given job, you run into the trouble of noise and high operating horsepower due to the lower efficiency and high outlet velocity. If the fan is too large, its operation is likely to be unstable, and if it is much too large we again get high horsepower due to the low efficiency.

To millers the subject of fans can hardly be mentioned without giving some consideration to dust collectors, as most of the fan problems in the mills are in connection with dust collecting or conveying systems.

We all know that the success of dust collector installations varies greatly. Some of them are perfectly satisfactory, while others cause trouble. For many years the cyclone collector has been used, and in a great many instances has been installed or selected by rule of thumb based on some previous installation.

During recent years much research work has been done on the subject of dust collectors. About five years ago our company set up a special dust laboratory at our plant in Boston, which is very well equipped for the careful study of the problem. For the most part, their work has been concentrated on the

(Continued on page 18a.)

I'd like to see you add
X-C PHOSPHATE because I'll get
BETTER BAKING!

I'd like to see you add
X-C PHOSPHATE because its extra
calcium promotes
BETTER HEALTH!

HOUSEWIVES and health authorities will both thank you for adding X-C Phosphate to your flour because X-C is extra rich in calcium.

As little as one pound of X-C to a barrel of your flour will:

1. Add enough acidity to counteract the excess alkalinity so often present in home-baked products.

2. Add more than enough healthful, bone-building calcium to meet government standards for calcium-enriched flour.

Add those two advantages to your flour and you are sure to add to your list of regular, satisfied customers... yet you will pay no more for X-C Phosphate than for ordinary phosphate used in phosphated all-purpose flours.

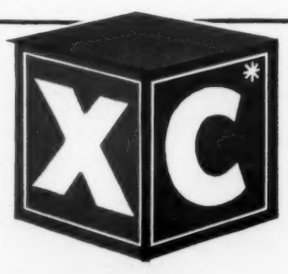
X-C Phosphate can be easily and inexpensively added to your flour in the same type of batch mixers used for self-rising flours...or it can be fed directly into your flour stream with any one of several feeders on the market.

A phosphate of exceptional quality, X-C is made by the producers of HT Phosphate from the same heart-of-the-vein food grade lime and from phosphoric acid which tests better than 99.9% pure.

For samples and full details, write MONSANTO CHEMICAL COMPANY, Phosphate Division, St. Louis, Missouri.

SPECIAL NOTE TO PRODUCERS OF ENRICHED FLOUR

Excess alkalinity destroys vitamin B1. By adding X-C Calcium Phosphate to your flour you keep your flour on the acid side... prevent excess alkalinity... and save as much as 50% of the B1 lost in baking!



CALCIUM PHOSPHATE

EXTRA RICH IN CALCIUM...FOR BETTER BAKING .BETTER HEALTH

*Extra calcium

Development of the Recording Dough Mixer

By C. O. Swanson
Kansas State College

THE problem of mixing a small dough uniformly and evenly with pins moving in a small bowl is different from mixing a large batch in a big machine. When mixing a small dough, it is necessary either to have the pins move at a differential ratio, or to have stationary pins which hold the dough against the moving pins. The latter principle was adopted in making the pull-fold-repull type of laboratory mixer (Swanson and Working, 1926). In a large mixer the gravity provides the necessary holding or pull back of the dough against the mixing arms. In the Werner-Pfleiderer mixer, the holding back is provided by the movement of the helical or spiral blades in opposite directions and at a differential speed ratio of two to three. Such a mixer does not produce as much of the pull-fold-repull treatment as is given the dough in high speed bakery mixers.

PULLING, FOLDING, REPULLING

The original suggestion of how this pulling-folding-repulling action might take place came from observing the construction and operation of taffy pullers sometimes seen in confectionery shop windows. Taffy is a very viscous and adhesive material and if an even and uniformly distributed pulling, folding and repulling action could be obtained on this substance, the same should be possible with dough. However, the mechanical treatment with the taffy puller does not start until the taffy has had a preliminary manual pulling so that it can be hung on the two moving arms. Since water is one ingredient when mixing starts, it is necessary to perform the operation in a bowl. This necessitates moving pins to stir the dough ingredients and stationary pins to hold the dough so that the moving pins can perform the necessary mechanical treatment.

THE PULL-FOLD-REPULL MIXER

A dough mixer embodying the foregoing principles was built in 1925 at Kansas State College (Swanson and Working, 1926). This dough mixer was later built as an attachment to the Hobart dough mixer and is called the "Hobart-Swanson mixer." Since the Hobart company has ceased manufacturing this attachment a mixer embodying the same principles is now made by the National Manufacturnig Co., Lincoln, Neb.

THE PROCESS OF PULLING-FOLDING-REPULLING

The moving and mixing parts contain two pairs of pins so supported and geared as to describe a planetary motion. That is, while each of the two pairs makes a revolution each pair makes a secondary revolution as it circles around the main center. This arrangement produces the double, or planetary, motion. The gearing of the upper pins is so timed that each pair alternately straddles and hurdles the fixed pins. The timing is also such that when one pair straddles, the other pair hurdles or passes between a fixed pin and the wall of the bowl. When a pair straddles a fixed pin, the dough is pulled, and then when this pair has pulled the dough over the fixed pin, it revolves so as to fold the dough, preparing it for being pulled again. Thus the dough is alternately pulled and folded and repulled so that all parts of the dough receive the same amount of mechanical treatment. This is very necessary in the laboratory testing of dough as well as in the bakery.

When the machine is used merely as a dough mixer, there may be two, three or four fixed pins with one or two pairs of moving pins. Fewer pins are an advantage in mixing small doughs, since more slinging around aids in the clean-up. When the machine is used as a recording mixer it is necessary to have two pairs of moving pins and either three or four fixed pins in order to provide uniform resistance in the mixing order.

USE OF A RECORDING WATTMETER

Several attempts were made at measuring the varying behavior of dough during mixing with the machine described in preceding paragraphs. Connecting the mixer with a recording wattmeter gave a measurable success (Swanson and Working, 1933). The curves obtained by this means gave a moving picture of the rate of dough development as well as dough breakdown under continued mechanical action. Various flours produced differences in curves. The curves from some flours rose rapidly, made a sharp turn at the top and then made a steep descent. The curves obtained from other flours rose more slowly, made a rounded top and made a much less steep descent. This indicated that flours differed in the rate of dough development and in the resistance to mechanical mixing. That is, the dough-handling properties varied greatly among flours. The main difficulty with the use of the wattmeter was that it registered the total energy input which included both the friction and the resistance of the dough. This situation prompted the development of a mechanical system for recording the varying behavior of dough while being mixed.

PRINCIPLES OF THE RECORDING DOUGH MIXER

The first recording dough mixer was a union of the pull-fold-repull dough mixer with a compound lever system for recording the varying resistances of the dough during the mixing process. The mixing bowl rested on ball bearings to reduce friction to the minimum. The compound lever system magnified the small but varying movements of the bowl resulting from changes in dough resistance. These movements had to be small because the free path of the moving pins was very limited in passing among the fixed pins. In order to register increasing resistance of dough while being mixed, as well as continued and decreasing resistance, it was necessary to have a weighing mechanism connected by a lever to the support of the bowl. This weighing mechanism was affected by a pendulum-supported weight and was adopted because of the absence of friction. This weight could be adjusted to fit the doughs from average flours as well as the width of the chart paper. This same lever which was connected directly with the bowl support and the pendulum was also connected with an adjustable oil dampener or shock absorber. This dampener prevented sudden swings of the pendulum and made the curves more smooth.

The chart paper chosen was that of Esterline-Angus. The rate of movement of the chart was controlled by a system of gears so adjusted that the rate of movement was one minute between the curved lines. Since the most suitable speed for the mixing of dough was not known, the first recording dough mixer was made with four sheets. These could be shifted at will and made it possible to study the effects of rate of mixing on dough development and dough disintegration.

Illustrations of the construction of this recording mixer as well as views of the machine itself are given by Swanson and Working (1933), by Swanson and Clark (1936) and by Swanson (1937).

CURVES REVEAL DOUGH HANDLING PROPERTIES

One of the most important facts revealed in the use of this mixer was the variation in curves from different wheat varieties (Swanson, 1936). The curves from some varieties rose rapidly, the turn at the top was comparatively sharp, the descent was steep, and the main band became smooth and narrow. This indicated rapid dough development for a given amount of energy input. But it also showed sensitiveness to mixing, which in turn means poor dough-handling properties. The curves from other varieties rose more slowly, the tops were more rounded, the descent was less steep and there was also less narrowing of the latter portion of the band width. This indicated a slower rate of dough development and also more tolerance to various degrees of mixing, which indicates better dough-handling properties. With the large use of machinery in the

Half of the Roller Floor in the New Flour Mill at Cordoba, Argentina

NEW FLOUR MILL OPENED BY SOUTH AMERICAN FIRM

A NEW flour mill at Cordoba, Argentina, controlled by Messrs. Minetti & Cia, was officially opened recently, with an inaugural ceremony carried out by the governor of the province of Cordoba. A ribbon in the Argentine colors, placed across the main entrance door, was cut by the governor, and the archbishop of Cordoba pronounced a blessing. The mill occupies the site of the old plant that was destroyed by fire on April 14, 1940.

A building contract was placed with Henry Simon, Ltd., in May, 1940, but the mill was not ready for operation until almost two and a half years later, due to the many difficulties encountered as a result of the war in obtaining and transporting materials. Several essential machines were lost in transit during the enemy's attempt to establish a blockade of the British Isles by submarine warfare.

An efficient lighting system, ample space for operations, and a modern mill laboratory to assure efficient control of process and products, are among the features of the plant, which is designed for a capacity of 180 tons of wheat in 24 hours.

The wheat cleaning and conditioning plant is of all-metal construction. The milling system comprises five breaks, three scratch, and 13 reduction operations. Scalping, grading, dusting and flour dressing are done almost entirely on plansifters. Modern packing equipment enables the production of 24 hours to be packed in eight hours.

History of the Minetti company began in 1892 when Don Domingo established the first mill at Santa Clara in the province of Santa Fe. The capacity of this small mill was just 30 tons of wheat per day. Today the mills controlled by Messrs. Minetti at Cordoba and other centers require a total of 1,500 tons of wheat daily, or a total yearly consumption of 450,000 tons of wheat.

HOW PURE IS "PURE"?

How PURE is "pure" salt? 99.75%? 99.46%? Or, do you need Diamond Crystal—99.96% pure—whose average variation is no more than 0.01%, plus or minus?

First let us ask—have you installed water-softening equipment? If you have, beware of impure salt. For salt impurities—calcium sulphate, calcium chloride, and magnesium chloride—are the same ones that make water hard.

If you calculate the hardness imparted to 40° brine by salt, you will see that 99.75% pure salt adds 267 parts per million of calcium and magnesium hardness. A 99.46% pure salt adds 572 parts per million of hardness. A 99.03% pure salt adds exactly 1030 parts per million. If your water softener takes out 100-150 parts per million, your salt may add several times the calcium and magnesium being removed! Pure Diamond Crystal Salt (99.96% pure) will add only 41 parts per million of calcium and magnesium hardness to 40° brine.

Don't forget that calcium and magnesium introduced into your food products must be added to what is in your water supply. For, in processing food products that contain pectin or protein, calcium and magnesium alter their physical properties, developing toughness. And, as you know, the public judges food products by their tenderness.

NEED HELP? HERE IT IS!

If *you* have a salt problem, write our Director of Technical Service, Diamond Crystal, Dept. A-6, St. Clair, Michigan.

DIAMOND CRYSTAL
ALBERGER PROCESS **SALT**

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modern bakery, dough-handling properties assume one of the primary quality considerations. Since dough-handling properties are inherent in a variety, the recording dough mixer became from the very start a valuable instrument in testing varieties in the wheat improvement work.

PROTEIN CONTENT A MAJOR FACTOR

Another important fact brought out by the curves of the recording dough mixer was the variation of curves within a variety. Curves within a variety often differed among themselves more than the curves between varieties. These variations are shown in curves presented by Swanson (1939). Continued use of the recording dough mixer demonstrated that protein content was the main factor for this variation within varieties. Therefore in comparing curves from different flours the protein content must be taken into consideration. Subsequent tests have shown that growth and storage conditions also have an influence. Thus while the curves have proved themselves very valuable, they do not show what is desired to know about a wheat or flour without reference to a number of factors. But this is true of all other tests for quality, even the baking test.

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——BREAD IS THE STAFF OF LIFE——

Conveyors Need Attention!

THERE are few pieces of equipment in the mill or elevator that suffer more from neglect than do screw conveyors. Adequate lubrication is very difficult, but it is an absolute essential of efficient operation. Grain or products of grain are always rather dusty, and even when they are not actually abrasive they still have the property of absorbing lubricants. Not only is friction loss high when bearings are "dry," but wear is excessive and will soon result in sagging and misalignment, causing still greater loss of efficiency. This loss is multiplied many times when sagging becomes great enough to permit the flights to scrape the conveyor linings.

The oil ducts in conveyor hangers are often stoppered at the top with a plug, or the shank of a grease or oil cup may be screwed in. There is, of course, a tendency for the dust to accumulate in the passageways, and it is not uncommon to find them so effectually closed that not even "thin water" could pass through and reach the bearing.

Probably the magnitude of power wastage common to the operation of screw conveyors is not often fully appreciated. The chief requirement for its avoidance is care—and the need for maintenance of all equipment has never been more important than at this time, when the milling industry faces its biggest job.

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for All Purposes!

COTTON bags are safely and economically delivering flour, grain, seeds, feeds, sugar, fertilizers, chemicals, produce, meals, nuts, and countless other articles. Sometimes it seems as though there is scarcely a material that is not satisfactorily shipped in a cotton bag designed for the purpose.

Coupled with this unusual versatility is exceptional strength. Cotton bags absorb terrific punishment and come back for more. Their salvage value is unsurpassed.

Cotton bags are extremely flexible, too. They readily conform to odd corners and shapes . . . permitting compact, maximum loads that resist slipping and shifting.

Insist on cotton bags—your best buy.

Note: NATIONAL CONSERVATION, *also, calls for cotton bags—bags that are used over and over again for many purposes—bags that save labor and shipping space.*

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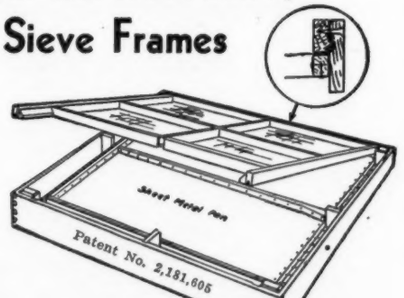

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Hard and Soft Winter Wheat
ST. LOUIS • KANSAS CITY • MINNEAPOLIS • DENVER • BUFFALO

Fans

(Continued from page 15a.)

collection of pulverized fuel fly ash, as it appeared to be the problem that was causing the most trouble throughout the country. In work of this kind it is necessary to investigate all types and sizes of collectors and the various kinds of dust.

The performance of dust collectors is dependent upon many variables such as the dust loading (grains per cubic foot), specific gravity, size distribution of the dust particles, air velocity and density.

The size of dust particles is measured in microns, a micron being 1/1,000th part of a millimeter, or 1/25,400th part of an inch. Thus a 25 micron particle has a diameter of 1/1,000th of an inch. The equivalents in microns of the ordinary screens used in dust sampling are as follows:

100 mesh	148 microns
150 mesh	105 microns
200 mesh	75 microns
250 mesh	60 microns
325 mesh	43 microns

With the simple cyclone under five feet in diameter and with an inlet velocity in the neighborhood of 3,500 feet per minute, we could expect a collection efficiency ranging from 95% of the 100 mesh particles down to 25% of the 325 mesh particles. In many dust samples substantial percentages of the dust are smaller than 20 microns. It is these smaller particles that are discharged, causing trouble from other parts of the plant and neighbors.

The types of collectors in general use today are the simple cyclone, groups of small cyclones, cloth screen arrestors, and electric precipitators. The electric precipitator is the most efficient. It is especially efficient on the extremely fine particles and less efficient on the large particles, which is just the opposite of other types of collectors.

The cloth screen collectors are widely used, giving collection efficiencies as high as 98% on fine materials. I believe that most of us are familiar with the many types of these collectors which are offered today by the various manufacturers. Their use is limited as to temperature of the air entering them. With cotton bags, the normal maximum temperature is 180° and with wool bags it is 250°. Some collectors have been built with asbestos cloth bags, but as a rule these have not been satisfactory.

The cyclone type collector is the most common in use today, and is very satisfactory for the collection of heavy and relatively coarse material. The use of several small diameter cyclones of special design in place of one large one results in remarkable improvements in efficiency. It is this type of collector that has been receiving special attention from the various manufacturers and for the past few years has been used rather extensively.

v v

EDITOR'S NOTE.—*This article is reproduced from the March Bulletin of the Association of Operative Millers. It was read before a meeting of District No. 5 of that organization. Mr. Oonk, the writer, is associated with the B. F. Sturtevant Co.*

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Top Quality

Malted Wheat Flour

It is essential that your hard wheat flours bake consistently to your established standards. But improper diastatic treatment can spoil your most careful wheat selection and milling methods.

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We will provide samples for experimental work in your own laboratory, or you may send to us samples of your untreated flours for analysis. Maltose or gassing power analyses in our laboratory are free to DIABLEND users. Ask for a sample and quotation of DIABLEND today.

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MAN-HOISTS

Reprinted from the "National Safety Council News Letter"

A FEW days ago, in one of our plants, a screw driver came zinging down along the man-hoist. It hit a man using the hoist, striking him a glancing blow on the head. He was not seriously injured.

There is no getting away from it; man-hoists are dangerous. So many of us use them so often that we forget the danger.

A man riding a man-hoist is using an unprotected shaftway. He does not have a roof over his head; he has no guards around him. He is standing on a small step, holding a handle, and suspended on a moving belt in a hole right down through a building.

We can't be too strict in our enforcement of a rule that nothing but a man should be carried on a man-hoist. It is so easy to get lax on this point. Some one from the office sticks a scratch pad under his arm and steps on. Then some one with an empty sample pan tries it. Then some one with two or three sample pans full or partly full gets on. Some one from the office has a brief case and wants to get up quickly. A man coming to work with his lunch or a bundle of clean clothes decides to ride. Where does it stop or where does it begin?

Actually, there is only one safe rule—nothing on the hoist but men. And in their pockets, nothing that doesn't belong there.

Most plants are rather strict in enforcing this rule, but it is so easy to break that we feel this warning should be read by all.

In one of our plants there are two ways of getting to the scale floor. One way is on the hoist and the other up the steps. Whenever, the scales are to be inspected by the inspector, several hundred 50-lb weights have to go up to the scale floor.

This plant uses a lot of precautions, but the fact remains that the weights are put on the steps one at a time and elevated. No one is allowed on the hoist during this time.

From a strict safety standpoint, there is no compromise. This should not be done. If the company, in designing this building, installed only the man-hoist and the steps, then the steps should be used for the transportation of any thing but men.

Another point is the protection of the shaftway. Some time ago we heard of material being piled too high around the shaftway on an upper floor. One bag worked loose and fell down. No one was one the hoist at the time, but what might have happened?

Man-hoists are dangerous, any way we look at it. There must be no letting down of the bars on the safe use of the hoists.

——BREAD IS THE STAFF OF LIFE——

A completely modern steam plant attains a thermal efficiency of about 18%, while in a diesel practically one third of the heat of the fuel is utilized. Of the remaining two thirds, about one half goes into the cooling water and the other into exhaust.

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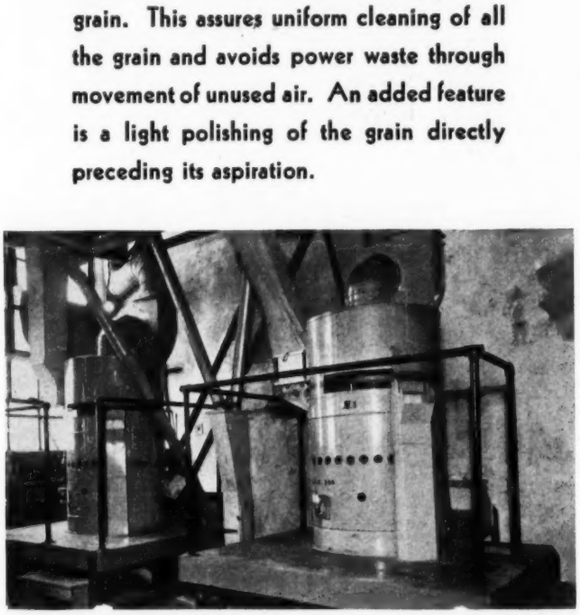

The two No. 30 Sealed Flow Aspirators above are used ahead of the grinding bins of a 2500 barrel flour unit in an Eastern mill.

HAAKY Equipment Doesn't Cost—*It Pays!*

Haaky Manufacturing Co.

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Elevator Men to Face Wartime Problems at Special Meeting

New wartime problems confronting plant operators will be aired and solutions sought at a specially called meeting of the Society of Grain Elevator Superintendents to be held at the Hotel Duluth, Duluth, Minn., June 18-20, according to an announcement from Gilbert P. Lane, Arcady Farms Milling Co.'s plant manager, Riverdale, Ill. The conference has been termed an "executive" meeting in an effort to reduce rail travel, but a large attendance nevertheless is expected.

Shortage of manpower, job instruction training, manning tables, replacement summaries, training and holding the new employee, safety training, salary and job freezing, women employees and the problems their introduction entails, and many other kindred discussions will take up one session. Handling farm-stored grains, carrying corn over the summer, moisture studies, and the successful round table on handling and storing, will take another session, and a third will be devoted to wartime protection, inspection of the precautionary measures in vogue in the Duluth-Superior area, static, dust explosion prevention and training the new employee in fire prevention work. Operation and maintenance questions will share a fourth session with the safety committee's reports and the awarding of trophies to those going through the last contest without an injury.

O. B. Duncan, Salina Terminal Elevator Co., was elected president of the Kansas City chapter recently. Harley J. Hixson, Continental Grain Co., is the new first vice president, and John Blowers, Wyandotte Elevator, Standard Milling Co., second vice president. Peyton A. Kier, Standard Milling Co., is now secretary-treasurer.

Robert R. Bredt, Fruen Milling Co., succeeds Clarence C. Bach, Twin City Trading Co., as president of the Minneapolis chapter of the society. Also elected at the last meeting was Clifford A. MacIver, Archer-Daniels-Midland Co., vice president. James Auld, Hales & Hunter Co. was re-elected secretary-treasurer.

Gordon Laugen, Archer-Daniels-Midland Co., is the new president of the Chicago chapter. Stephen Halac, the Glidden Co., is first vice president, and Lloyd Forsell, Albert Schwill & Co., second vice president. Leonard Danielson, Arcady Farms Milling Co., is secretary.

—BREAD IS THE STAFF OF LIFE—

PUBLISHES NEW CATALOG

The Teuscher Pulley & Belting Co., St. Louis, Mo., has just issued its new catalog No. 44, on power transmission machinery and equipment. The company celebrates its 44th anniversary this year, having started the business on March 16, 1899.

—BREAD IS THE STAFF OF LIFE—

Proper Grinding of Screenings Is Feed Mill Duty

● By W. B. Griem

Wisconsin Dept. of Agriculture

GRAIN screenings are fed in very large quantities in this country. Their gross analysis, when compared with price, usually makes them an economical ingredient for dairy and sheep feeds.

Research work on the feeding value of screenings is limited, although some Canadian work indicates that the fraction containing the small black weed seeds, which includes the mustards, is of poor value. Research work has probably been neglected because screenings are variable both in composition and analysis. It would be impossible to make much use of experimental results obtained with any one particular lot of screenings.

On the practical side, the long and continued use of screenings has firmly entrenched the product in the feed trade. Millions of sheep have been fitted for market on a grain ration consisting almost entirely of screenings. Many dairy

★ *The Esmueller Co.* ★

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"The Test of Time Since '99"

herds receive a 16% protein screenings base feed as almost the sole grain ration. Milk production is usually satisfactory. Criticism from the feeding side is that the cows do not always keep up their body weight during lactation unless some grain is fed.

The purpose of this article is to call to the attention of manufacturers their responsibility in the proper grinding of screenings prior to incorporation into mixed feeds. Some of the state feed control laws specify that no viable weed seeds are to be present in feeds. Others set a tolerance, the Wisconsin law specifying a maximum of 0.25% viable non-noxious and 0.01% viable noxious. The reason for these limitations is obvious when it is considered that feeds are a source of weed infestation. Feed ingredients are assembled from widely scattered regions so that viable weed seeds in feed can rapidly distribute new weeds to a region or farm previously free of such weeds. The tremendous economic loss in crop production from weeds is well known. The losses due to tainted milk from certain weeds is also a serious problem in the dairy regions.

The old Maryland work and the more recent Nebraska work show conclusively that a large percentage of weed seeds pass through the digestive system of all farm animals retaining high germinative capacity. Poultry practically destroy all weed seeds. Here the difficulty is that they refuse many of the seeds which are thereby scattered on the range or into the litter. The Nebraska findings indicate that of six weed seeds studied, sheep, horses, hogs and calves passed 64, 87, 88 and 96 viable seeds respectively per 1,000 fed. Well over half of the weed seeds separated from dairy feeds germinated in tests made in Wisconsin feed control laboratory. Unbroken endosperms sometimes will germinate.

When manure is stacked for two or three months the viability of the seeds is practically entirely destroyed. However, the experiment stations recommend continual spreading of manure in order to conserve the fertilizer value. Also, the animals retain the seeds for several days which permits dropping directly in the pasture.

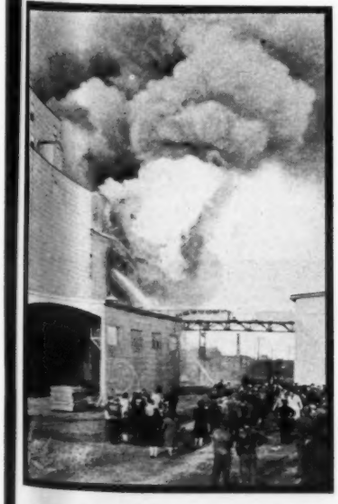
The only solution, therefore, is to destroy the seeds before the feeds are formulated. The grains used in scratch feeds can be easily cleaned thereby eliminating this type of product as a possible source of weed infestation.

The examination of many samples of dairy feed indicates that some manufacturers are doing an excellent job in grinding screenings. Others should be able to do comparable work. From observation it appears that the load in the hammer mills is of great importance. When the grinders are loaded too heavily the hammers do not have the ability to reduce the seeds properly. It would seem that grinders could be so adjusted for size of screen, speed and load that ground screenings would be practically free of unbroken weed seeds without making their use prohibitive because of grinding cost.

For convenience in examining ground screenings for unbroken weed seeds it is necessary to examine only the portion which passes a 2 mm round holed screen and is retained on a 1 mm round holed screen.

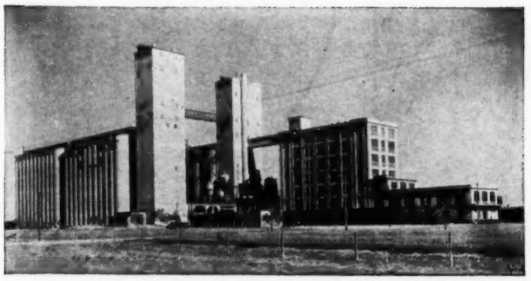
It is reasonable to believe that if all feed manufacturers would properly grind their screenings the acceptance of screenings base dairy feeds would be greatly enhanced. Manufacturers would be doing a great service to agriculture. The American farmer is definitely becoming "weed conscious" as is indicated by the many noxious weed eradication programs now under way.

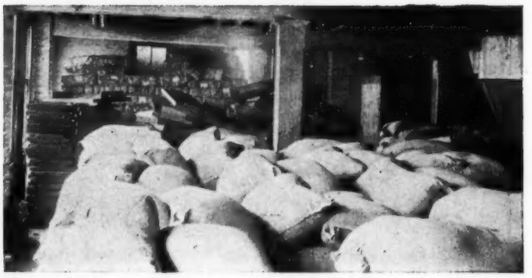
CANADIAN MILL BURNS



Fire causing $75,000 damage destroyed the Lake of the Woods Milling Co., Ltd.'s 800-bbl mill, elevator and warehouse at Portage la Prairie, near Winnipeg. Losses included 62,000 bushels of wheat and some flour. The mill, built in 1885, was bought by the Lake of the Woods company in 1891.

SIX ADVANTAGES of Liquid HCN Fumigation Aid Busy Mill Men





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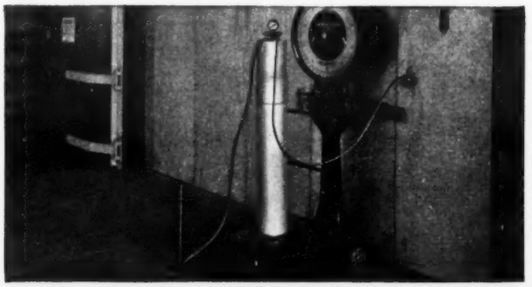
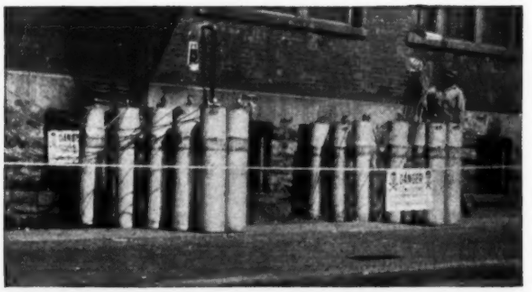
2. ADAPTABLE to fumigation of all types of mills and warehouses. Liquid HCN is clean, easy to use, rapid in action. A minimum amount of sealing-up or other special preparation is required for efficient fumigation when Liquid HCN is employed. This means minimum interruption of work or production schedules — an important feature for busy mills.





3. HARMLESS TO PRODUCTS AND EQUIPMENT. Liquid HCN has no adverse effects on flour or other mill products. It will not affect the product nor attack or corrode hard-to-get machinery or operating equipment.

4. SAFE AND CONVENIENT to use, Liquid HCN is applied from the outside—after building is vacated and locked. A few simple precautions make Liquid HCN entirely safe for all mill fumigation requirements.

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Weevil-Killing Chemical Dust Not Proved, Say USDA Men

WASHINGTON, D. C.—No chemical dust to control weevils in stored wheat has yet been found which would justify its use for commercial purposes, according to officials of the division of cereal and forage insect investigation of the Department of Agriculture, who are investigating a report from London that British chemists have discovered such a preventive from spoilage of grain by insects.

The London report said that the new discovery would result in a $1,500,000,000 cut in stored wheat loss," but failed clearly to identify the character of the preventive. The story further said that tests had only been made in small laboratory experiments, and gave no indication that the dust had been tried under commercial conditions or recommended for commercial use.

"We are making an effort through official channels to learn the identity of the chemical dust referred to in the London report," said C. M. Packard, in charge of the department's division on cereal and forage insect investigations. "Whatever it is, its efficiency when used in stored grain for the prevention or control of insect injury, and its suitability for such use, would have to be established by adequate trials by responsible and disinterested agencies in this country before we could recommend it for commercial use."

Dr. Packard added that a number of dusts have been tested by Department of Agriculture investigators, but none of them has proven suitable for practical use in grains to be used for food or feed.

Officials of the Department of Agriculture have experimented unsuccessfully with pure quartz sand ground to a fine powder for preserving stored wheat from insect attack, and tests have also been made using borax, soybean flour, sulfur and lime.

Reporting negative results obtained on insecticidal value of certain dusts from the protection of stored grain, a government publication makes these observations:

"To mix powdered sand with grain at the rate of 600 lbs per 1,000 bus and then remove the sand would seem to make the treatment impractical from a purely economic viewpoint.

"Sulfur dust was slightly effective with 10 and 12% moisture wheat, but in the 16% moisture wheat treated with this dust insect development was almost as rapid as in untreated wheat of the same moisture content. Lime showed good protection for 10 and 12% moisture wheat and some protection for 16% moisture wheat, although not adequate for practical purposes.

"With the exception of the wheat having a 16% moisture content, there was no increase in infestation in the samples treated with borax, and no life was apparent in any of the samples at the time of examination. It would seem therefore that treatment with 1% by weight of borax is adequate protection for stored grain against insect attack. Unfortunately, its use cannot be recommended since it is absorbed by the grain.

"Insect development varied among the different untreated samples of wheat. Development was exceedingly slow in that of 10 and 12% moisture content but rapid in wheat of 16% moisture content.

"A number of poisonous dusts have been recommended from time to time for the protection of stored seeds from insect attack and there is little doubt that many of them are highly effective. They are, however, of value only in protecting grain that is intended for seeding purposes, and it is doubtful whether they should even be recommended for this purpose owing to the chance that treated grain may accidently be used for food.

"According to the results of these studies it does not seem likely that adequate protection from insects can be obtained for stored grain by admixture with dusts other than those which are poisonous or which exert some deleterious effect on the grain."

Manpower

(Continued from page 6a.)

ed, there has been a marked decrease in pirating, hoarding, job shopping and absenteeism.

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Industrial Alcohol

(Continued from page 3a.)

tities than any other grain because of its higher starch content and the comparative market value. From a strictly economical standpoint more corn can be raised from an acre of ground and the cost of production per bushel is less than for any other grain.

Rye is only used in small quantities, usually for yeast food. It may be used in the manufacture of whisky and spirits for its flavoring value. Rye is lower in starch content than either corn or wheat, but still it can be used successfully if the cost of a pound of starch in rye is less than the cost of starch in any other grain. Rye, like wheat, causes more trouble in the recovery of distillers' dried grain than corn, due to the type of protein in rye. The feeding value of rye distillers' dried grain is less than the same product made from corn. This is due to a lower fat and vitamin A content of rye in comparison to corn.

Barley malt is used in the manufacture of alcohol for the purpose of aiding in the conversion of starch to sugar. Since yeast will not work on starch, it is necessary to convert the starch into sugar so the enzymes of yeast will be able to change the sugar into alcohol by the process of fermentation. Maltsters are able to obtain a higher diastatic value from barley when malted than from any other grain. This does not mean that barley must be used for conversion, but simply that it is economical to do so.

Wheat is being used in large volume with very good results. Even though the starch content of wheat is nearly as high as corn the distilleries are having trouble to obtain as high a fermentation efficiency as they do using corn. This is particularly true where wheat is used alone; foaming in the fermenter may result in loss of mash by overflowing the top of the fermenter.

Wheat, like rye, contains a different type protein than corn, which results in fouling the tubes in the evaporators, which reduces the capacity of the recovery plant for distillers' dried grain. Having a surplus of wheat in storage and no surplus of corn it is a life-saver in the production of alcohol for war purposes the same as being the staff of life for human food. On the other hand, so much of our agricultural livelihood is dependent on raising wheat that the use of it for alcohol certainly does create a valuable market for a part of the surplus.

There is no question but what the millers have played an important part in furnishing a raw product to replace molasses in the manufacture of alcohol. Granulated flour can be used to advantage in any commercial alcohol plant that does not have equipment for grinding its own grain. It may also be used in small distilleries which have no equipment for the recovery of their by-products. Some distilleries are using a combination of granulated flour and whole grain.

Granulated flour is higher in starch content than any of our grains because the bran coat and germ stock have been removed. Our experience in using it alone resulted in a lower fermentation efficiency than when it was used in combination with corn. Most of the regular grain distilleries do not have suitable equipment for moving the granulated flour from the box car to the cooker or suitable equipment for recovering the distillers' dried grain and solubles. There are only a very few distillers who have equipment for recovering distillers' dried solubles. Without this equipment practically all the by-product would be lost when granulated flour is used for the mash bill in the distillery.

Cattle feeders who take the stillage from the small distilleries in Kentucky do not like the use of granulated flour because of its low percentage of solids and vitamin A content.

In producing industrial alcohol from an all grain mash bill the average distillery with modern recovery equipment is able to recover 17 lbs of dark distillers' dried grain or 8 lbs of distillers' dried solubles and 9 lbs of light distillers' dried grain from each bushel of whole grain mashed. These grains recovered from the manufacture of alcohol are needed to supply the great demand for protein and supplement feed for livestock. The dark distillers' dried grains and the light distillers' dried grains are used for the various types of cattle, sheep and horse feeds. The distillers' dried solubles are being used for poultry and growing pig and calf rations. Research over the past four years has shown that distillers' dried solubles will replace dried skim milk in poultry rations. This is due to its high content of yeast protein and the B complex vitamins, namely, riboflavin, pantothenic acid, nicotinic acid, thiamin and others. With the shortage of dried skim milk and whole milk it is very essential that as much distillers' dried solubles are produced as possible.

Some of the distillers believe if the miller is going to process a grain for the distillers he should deliver a product over 90% starch; that is, go all the way in place of just removing the bran coat. A 90% starch content product might be a good product to deliver to the plants making butylene glycol, a product used in making synthetic rubber. Then there would be no recovery problems.

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GRINDING—THE BASIS OF FEED

GRAINS used for feeding animals or as food for human beings provide both fuel for producing heat and energy and materials from which new body cells may be built. Like any other fuel or building material, they must be prepared and placed in a favorable environment before they can be utilized. Large chunks of coal, or even of wood, will not "burn" under conditions usually existing in a stove or furnace, and in the same way, relatively large cereal grains will not readily enter into the slow combustion process which must proceed without interruption to avoid waste and disorder.

With respect to the utilization of substances necessary for body growth and repair, careful preparation is no less necessary. Engineers do not dump a few tons of clay and another few tons of iron into a hopper and expect them to be transformed into a reinforced concrete building. On the contrary, elaborate processing precedes the formation of steel bars and the stone-like "concrete" which encases them in many modern structures. All this processing is physical—that is, physical means are employed in preparing for whatever chemical changes are to occur.

It is believed that man first used grains for food in their natural state, but many centuries must have elapsed since the discovery that processing them in some way not only made them more palatable but more efficient. Roasting was probably resorted to in very early times, and the roasted berries were found vastly superior to raw ones. Roasting facilitated the "milling process" carried on by the teeth. The berries could be divided into small particles with greater ease, and no doubt the chemical nature of the constituents was greatly altered by heat in a manner making assimilation more nearly perfect.

It is curious that man should have so completely neglected the processing of grains for feeding domestic animals. Only a few decades ago a great many farmers fed fattening steers corn on the ear, merely breaking the ears so that the animals could get the broken pieces in their mouths. As might have been expected, the bovine molars failed to reduce a large percentage of the kernels, though they presumably did a fair job of shelling them off the cob. No doubt some one has at some time computed the average percentage of the grain assimilated and the percentage rejected, but no figures are available at the moment.

Early man was not satisfied with either roasted whole grains or raw meals for his own sustenance, and long before he made any effort whatsoever to crack or grind for the benefit of domestic animals, he not only ground grains for his own use but separated out the floury portions and formed with them and water—and perhaps some other ingredients—a dough which when baked turned into bread, of a sort. It may be that he was coddling himself, and that in so doing he started a nefarious project which has altered his digestive apparatus so much that he is today quite incapable of utilizing raw grains for food, ground or unground.

If what the faddists say about this and that and the other thing is true, an exceedingly bad situation was thus created. It is said, however, that the alarm expressed concerning the alleged dental deficiencies of modern man, compared with his distant ancestors, is just a little far fetched. Evidence from the long past indicates strongly that teeth are not so very durable as grinders of grains—which is not surprising when their structure and composition are compared with the finest millstones ever built. Even the very hard metal rolls now used need to have their surfaces refinished frequently when grinding grains that are free from sand and grit. If they had to work on the same materials the teeth of ancient man did they would need fixing oftener than they do.

It was not merely because teeth wore out too quickly that it was thought advisable to relieve them of a good part of the work they had performed. The performance was never very good, and the digestive tract was called upon to do what the teeth didn't. Possibly this turned out fairly well when it was the chief function of the man, but when he turned his energies to other tasks, particularly to mental ones, either the one job or the other was neglected. Energy is required when work of any kind is done, and there is no other form of energy as expensive as the energy of living muscles.

When muscles are used to prepare food for assimilation, and to carry out the process of assimilation with foods inadequately prepared, they require so much of the energy produced that there is little left for anything else. The use of grinding (or crushing) apparatus, even when the energy was supplied by human legs and backs, threw a heavy burden on slaves but relieved the masters of a tremendous task. In those times only the masters and their retinues lived; slaves merely existed. Later, when beasts of burden were pressed into service as prime movers of grinding or crushing mills, mankind as a whole began its first real advance in civilization.

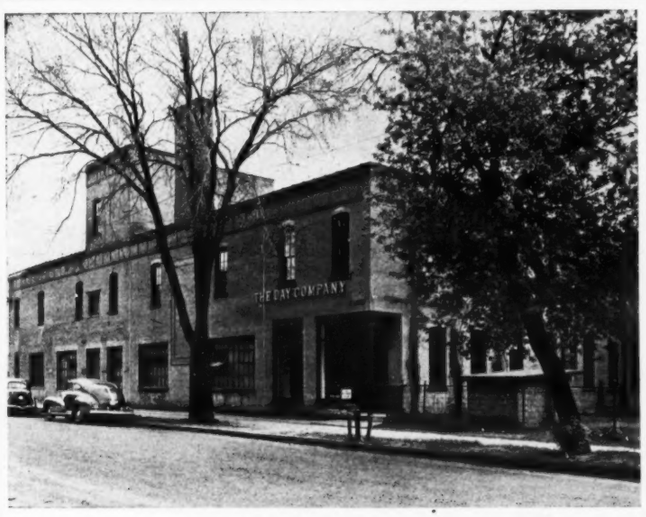
The mill, operated by mechanical energy, became the most potent force in the development of man. It enabled him to nurture his body and still have energy left over for other uses. From the mechanical mill—the grinder, the first instrument in the process accomplishing effectual assimilation of nutriment—came all other mechanical devices, including vehicles of transportation and apparatus for providing comfort, convenience and sanitation. Without the mill there would have been no telescopes to search the skies, no microscopes to help in the fight against disease. There would have been no books to read, no music worthy of the name, no security against plague and pestilence, no organized society of any description.

The mill has advanced from a crude makeshift device to a complex system of efficient machines designed to prepare grains both for human and livestock consumption with high economy and precision. In spite of a tremendous propaganda, white bread has retained its prestige, and white bread is the product of wheat carefully selected and milled under conditions insuring not only economical production but purity and adaptability in a very high degree. With the products of grains, mankind found a fair measure of security, and he could retain it with virtually every other source of food cut off; without them, the advancement gained in a score of centuries would surely slip away.

The ground products of grain are important not merely because they relieve animal molars of tasks impossible of full accomplishment but because they can be blended with other ingredients useful in the provision of a "balanced" diet. For hundreds of years little if any conscious thought was given to this, even with respect to needs of human beings, but it is most remarkable that for so long a time the mill was virtually unused in the preparation of animal feedingstuffs. Apparently it did not occur to anyone that the "fuel" which supplied the power of the beasts used prior to invention of the water mill could be utilized more efficiently by appropriating a part of that power for fuel preparation, and the period of awakening is within the memory of most active men.

Today the feed mill is not merely an establishment in which grains are ground or crushed, although grinding is still the first and most important step (after cleaning) in the preparation of commercial mixed feeds. These are produced for every conceivable purpose, and they are in the animal nutrition what well-prepared bread is in the diet of humankind. They include other useful ingredients besides the ground products of grains, but as with bread, these other ingredients are secondary.

The mill—that is, the actual grinding apparatus—is of no less importance now in the production of feedingstuffs than in the production of breadstuffs. In milling flour, a multiplicity of grain separators and cleaners, middlings purifiers and sifters are necessary adjuncts of the grinder—the roller mill; in the preparation of commercial mixed feeds, the grinders—in some cases rolls and in others various types of cutters, hammer mills or mills employing rapidly-revolving steel plates



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as reducing mediums—are supplemented by machines for cleaning the grain and apparatus and equipment for blending and mixing various ground products with whatever other ingredients are required.

With very few exceptions, modern flour mills as well as modern plants for grinding and blending commercial feeds are powered either with electric motors or diesel engines. In many instances where a diesel is the prime mover it drives an electric generator which transmits energy to several motors advantageously located. Never before in history has power been as economically produced, although the cost to the user is not always as low now as it has been at some time in the past. This is due not to inefficiency of power production or utilization, but to the higher cost of fuels.

The electric motor is not strictly a prime mover. It should be classed with transmission equipment, and whether or not it is justified in that respect by efficiency is a matter that must be left to the judgment of an engineer familiar with all the conditions. Other transmission equipment—line-shafts, pulleys, belting, etc.—must be judged likewise upon evidence, and not upon guesses or the opinion of anyone likely to be swayed by prejudice or self-interest.

The term "modern" has been used several times in connection with plants designed to mill flour as well as those manufacturing feedingstuffs as principal products, but it was not intended to convey the thought that all mills of either type in operation at the present time are strictly modern with respect to equipment or procedure. It can be said that most are modern in purpose—which means that the desirability of operating toward well-understood ends is now fairly well recognized. Year by year this recognition becomes more widespread. In spite of all evidence apparently to the contrary, it has been demonstrated time and time again that milling can be made a profitable business when business methods are employed, and the greatest of these is efficient production.

THE GRAIN VAULTS AT MALTA

Still in use, according to recent news notes from Malta, are the ancient underground grain storage vaults at Valetta shown in the accompanying pictures. These granaries are hewn out of the rock foundation upon which the city stands, as are the shelters which seem to have protected most of the inhabitants under Malta's severe aerial strafing of World War II. They have been used for grain storage since the days of the Knights of Malta, and probably were built after the siege by the Turks in 1565. They undoubtedly were constructed as a reserve storage in time of siege or war, and as they are always kept well filled they still fulfill the same purpose. The tops or entrances to the wells are sealed with huge round stones. The mills of Malta use these granaries and receive storage certificates from the government, which controls them. When grain is taken out, a tripod with a pulley wheel is rigged up over the entrance hole and one or two men go down and fill baskets that hold about a bushel and a half. These are hauled up by hand, emptied into sacks and hauled to the mill. A thick layer of straw is used to cover the grain in each vault as a means of preventing moisture damage.

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AND THE ANSWER, MR. MILLER, IS:

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GENERAL MACHINERY TREATMENT, followed by occasional SPOT treatments with LARVACIDE as recommended, will concentrate this penetrating gas where the enemy is thickest. Your LARVACIDE gas attack will smack them in the toughest spots, right through tangled webbing and boot stock, cleaning out not only the full-grown fighters, but the larvae and egg life to boot.

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and *Without Exposing Operator to Fumes*

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Larvacide comes in cylinders 25-180 lbs. and handy 1 lb. Dispenser Bottles, each in sealed can, 6 or 12 to wooden case. Stocked in or near your neighborhood. Address

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FIRE PROTECTION MEN HOLD ANNUAL MEETING

Measures to Safeguard Wartime Production From Fire Menace Discussed at Forty-Seventh Convention

CHICAGO, ILL.—Nearly a thousand high ranking Army and Navy officers, fire chiefs, fire marshals, industrial fire protection men, insurance men and many others from all parts of the United States and Canada gathered at the Palmer House, Chicago, May 10-13, to discuss essential measures to safeguard wartime production from fire due to sabotage, bombing, or the many accidental hazards associated with emergency production at the forty-seventh annual meeting of the National Fire Protection Association. Detailed reports upon the specific fire problems in major fields constituted, as usual, one of the highlights of the meeting.

On the evening of May 10, David J. Price, of the United States Department of Agriculture and President of the National Fire Protection Association, presided at the first general session. President Price said that there were more large loss fires in American industrial plants in 1942 than in any similar period in history, while in the first three months of the present year—1943—there were about as many big industrial fires as occurred during the entire year of 1942.

The conference closed on the afternoon of May 13 when H. L. Miner, manager, Safety and Fire Protection Division, E. I. du Pont de Nemours & Co., Inc., spoke on "Safeguarding War Industry." E. J. Meyers, chairman of the N. F. P. A. committee on static electricity, reported on the use of electrically conductive flooring materials to minimize the danger of static electricity and non-sparking floor surfaces in war plants handling explosive and flammable materials. A. H. Nuckolls, chairman of the N. F. P. A. committee on hazardous chemicals and explosives, reported on the fire hazard properties, storage methods and extinguishing techniques for various chemicals, formerly limited to laboratories, which have come into common use in war production. H. R. Brown, chairman of the N. F. P. A. committee on dust explosion hazards, presented a report on the prevention of magnesium dust explosions.

David J. Price, Principal Chemical Engineer, Bureau of Agricultural and Industrial Chemistry, U. S. Department of Agriculture, was re-elected president of the National Fire Protection Association as the forty-seventh annual meeting was brought to a close. Others re-elected were Richard E. Vernor, Chicago, and C. C. Johnson, New York, vice presidents, and Hovey T. Freeman, Providence, R. I., secretary-treasurer.

TO HIT 'EM H-A-R-D-E-R

THE year 1943 promises to be the grimmest, hardest year this country has ever faced. Every effort, and every dollar of national income not absolutely needed for existence, should go into war work and War Bonds.

In the Pay Roll Savings Plan, America finds a potent weapon for the winning of the war—and one of the soundest guarantees of the preservation of the American way of life!

Today about 30,000,000 wage earners, in 175,000 plants, are buying War Bonds at the rate of nearly half a billion dollars a month. *Great as this sum is, it is not enough!* For the more dollars made available now, the fewer the lives laid down on the bloody roads to Berlin and Tokio!

You've undoubtedly got a Pay Roll Savings Plan in your own plant. But how long is it since you last checked up on its progress? *If it now shows only about 10% of the gross payroll going into War Bonds, it needs jacking up!*

This is a *continuing* effort—and it needs *continual* attention and *continual* stimulation to get fullest results.

You can well afford to give this matter your close personal attention! The actual case histories of thousands of plants prove that the successful working out of a Pay Roll Savings Plan gives labor and management a common interest that almost inevitably results in better mutual understanding and better labor relations.

Minor misunderstandings and wage disputes become fewer. Production usually increases, and company spirit soars. And it goes without saying that workers with substantial savings are usually far more satisfied and more dependable.

And one thing more, these War Bonds are not only going to help win the war, they are also going to do much to close the dangerous inflationary gap, and help prevent post-war depression. The time and effort *you* now put in in selling War Bonds and teaching your workers to save, rather than to spend, will be richly repaid many times over—now and when the war is won.

★ ★ ★

You've done your bit Now do your best!

This space is a contribution to victory today and sound business tomorrow by
THE NORTHWESTERN MILLER

—BREAD IS THE STAFF OF LIFE—

Flour Mill Employees Take Dunwoody Course

A machine operator's training course designed for employees of war plants is now in operation at Dunwoody Industrial Institute, Minneapolis. Under the plan announced by Dr. C. A. Prosser, director of the institute, no charge is made for the course either to the individual or to the firm participating in the program.

The improvement course consists of an eight-hour day for a period of 12 weeks during which employees selected for it will be given general instruction in the operation of some one or more machines and in subjects related to the operations of machines.

Eighteen employees of General Mills, Inc., were among those present at the first class Monday, May 24. High praise for the project came from plant heads and employees alike. Fred Blumers, plant manager of General Mills' mechanical manufacturing division, wrote Dr. Prosser:

"In this splendid contribution you are making to the war effort you are adding but another page to the distinguished record that your institute has built in the past which has made it one of the outstanding institutions of the country."

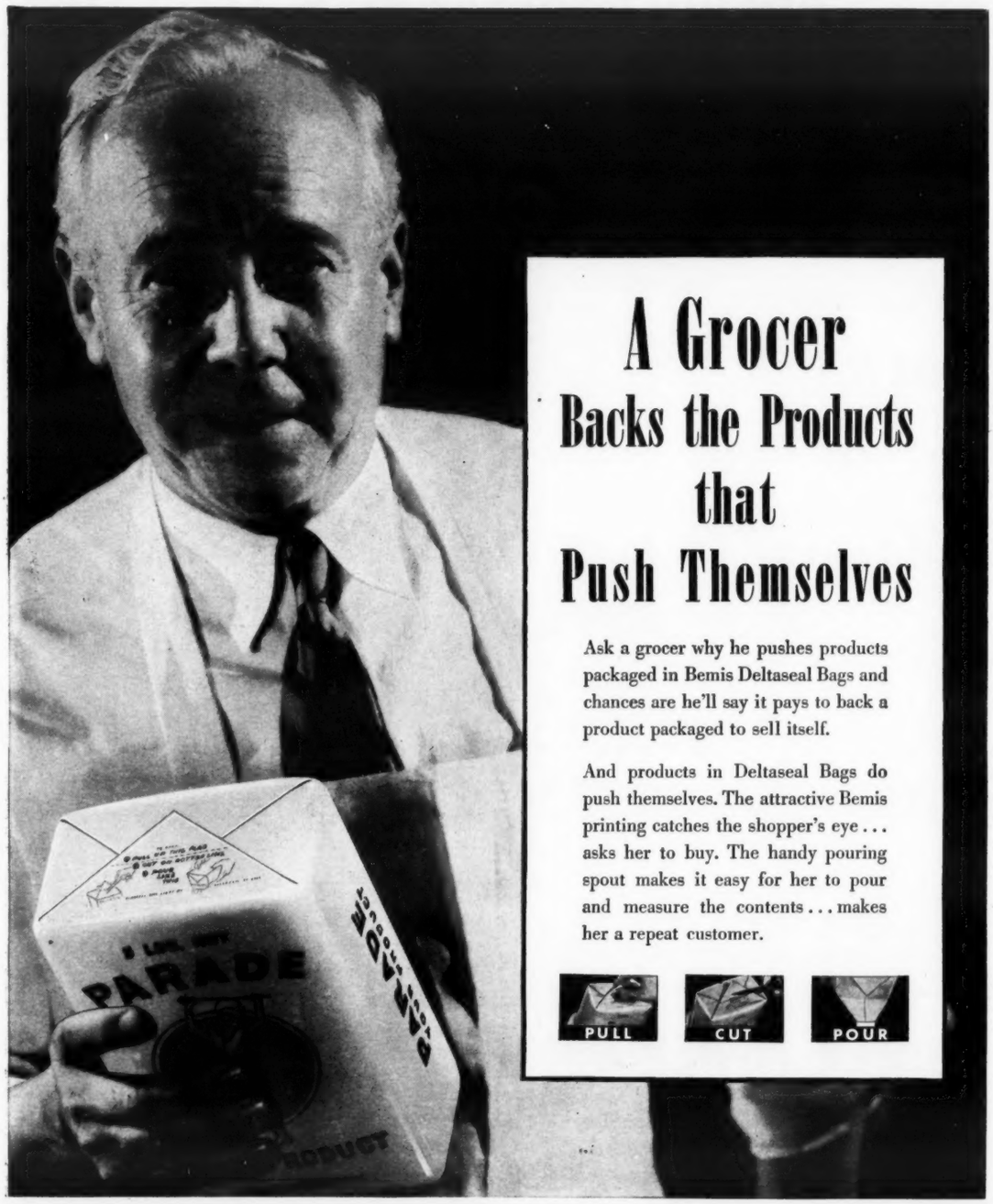
—BREAD IS THE STAFF OF LIFE—

ASSISTANT LABORATORY MANAGER

Dr. A. G. Olsen has been appointed assistant manager of General Foods Central Laboratories at Hoboken, N. J. He will continue as director of the food technology section.

Dr. Olsen has been with the company since 1923 when he joined the research department of the Postum Cereal Co., Inc., Battle Creek, Mich. Before becoming associated with the Central Laboratories in 1939, he was research director of another GF subsidiary, Walter Baker & Co., Inc., Dorchester, Mass. He is a member of the American Association of Cereal Chemists, the American Chemical Society, and a fellow of the American Association for the Advancement of Science.

A. B. Doran, formerly manager of the office and service divisions of the Central Laboratories, has been transferred to General Foods headquarters office as assistant to the manager of the research and development department.



A Grocer Backs the Products that Push Themselves

Ask a grocer why he pushes products packaged in Bemis Deltaseal Bags and chances are he'll say it pays to back a product packaged to sell itself.

And products in Deltaseal Bags do push themselves. The attractive Bemis printing catches the shopper's eye . . . asks her to buy. The handy pouring spout makes it easy for her to pour and measure the contents . . . makes her a repeat customer.

BEMIS BRO. BAG CO.

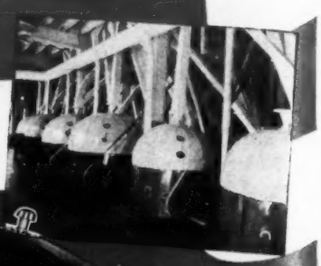
Headquarters for the

DELTASEAL System of PACKAGING

Minneapolis, Minnesota

OFFICES: Baltimore • Boston • Brooklyn • Buffalo • Charlotte • Chicago • Denver • Detroit • E. Pepperell • Houston • Indianapolis • Kansas City • Los Angeles • Louisville • Memphis • Mobile • New Orleans • New York City • Norfolk • Oklahoma City • Omaha • Peoria • St. Louis • Salina • Salt Lake City • San Francisco • Seattle • Wichita

"REVOLUTIONARY" A YEAR AGO . . .



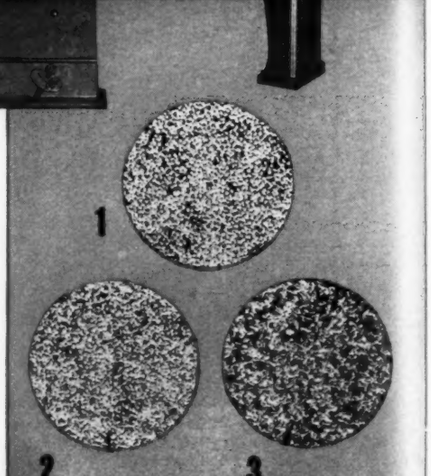
PROVED IN ACTION TODAY . . .

That's the Story of the PUROGRADER

Hart Carter's Sensational Milling Development!

MILLERS PRAISE IMPROVED QUALITY, LOWER POWER COSTS!

Considered a year ago as a "revolutionary milling advancement," the Purograder has definitely proved to the complete satisfaction of leading millers that it meets their requirements for efficiency, accuracy and economy. Not only has its unusual combination of principles gained quick and ready acceptance but the results delivered have proved beyond a doubt that the machine offers significant milling advantages. Separations are so thorough, branny material can be sent directly to feed from the head of the mill. Use of the Purograder also conserves moisture, keeping middlings mellower and bran tougher so that bran adhering to middlings can be more easily flaked out and scalped off. Although new installations will be limited until after Victory has been won, the success of the machine to date in mills fortunate enough to buy and install early, indicates widespread benefits to the milling industry in the postwar period ahead.



1 Large middlings going to coarse sizings roll. Note uniformity of size.

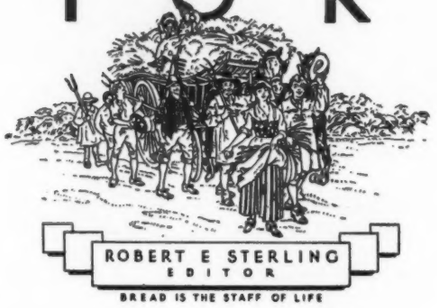
2 Smaller middlings going to fine sizings roll.

3 Loose bran. Can be sent directly to feed.

HART-CARTER COMPANY

680 Nineteenth Avenue N. E. Minneapolis, Minnesota

EDITORIAL



IN THIS FIRM FAITH

WHILE the steady advance in the officially computed wheat price parity and imminence of announcement of approximately eleven cents per bushel increase in the government's loan rate on wheat daily brings nearer the apparently inevitable conflict between high wheat costs and low ceiling prices on flour and bread, last week's developments encouraged the hope that direct processor subsidies would not be used to soften the blow of crashing price worlds.

In Congress, in the Department of Agriculture, among such practical minded men in authority as Chester C. Davis and, most particularly, among the industries and trades likely to be affected, opposition to payment of subsidies to maintain the fiction of noninflationary food price levels grew from day to day. Along with this, or rather an essential part of it, was steadily increasing understanding and resentment of the administration policy of easing itself out of its labor wage impasse by the futile "rolling back" of living costs at prospectively very great outlay from the treasury.

It is especially encouraging to observe that whatever uncertainty may have existed as to the attitude of the milling industry toward processing subsidies now is definitely at an end. The industry, probably with few or no dissenting voices, has declared that it wants no subsidies with all of their inescapable implications of bonuses and profiteering and all of the inevitable accompaniments of technical regulations and consequent inept bureaucratic policing. On this sound rock of faith it has taken its stand, and it is not at all likely that it will change this stand for any reason of expediency, even of possible profit for itself. This is as it should be.

——BREAD IS THE STAFF OF LIFE——

PRICE PSYCHOSIS

WE doubt if those learned in what we used, in our school days, to call "the science of the soul" would approve the phrase captioning this comment. Yet there unquestionably exists a mental state which may be so termed with reasonable respect for technical accuracy. Such psychosis is fairly general in all business and industry. No doubt members of many industries believe it to be especially pronounced in their own field. We ourselves are certain that it is definitely characteristic of the flour milling business.

There was a time up to perhaps a score or so years ago when the formula "price *plus* production *equals* profit" was widely, almost universally, recognized in the conduct of even the smallest flour milling establishment. The three terms pulled together. They were not even recognized as sometimes antithetical. What each miller did was to offer his products for sale at a price which yielded a profit. If there were people to buy at that price he ran his mill. If there was not a sufficient demand at that price he reduced operation or even closed down his mill until demand revived. It simply was not in his book that price should be reduced to force people to buy what they did not need or care for.

Then along came production volume. Scientific cost accounting discovered that no miller could afford to shut down his mill or even to reduce its rate of operation. It also discovered that price animated production, that with a sufficiently low price any particular mill could be operated at full capacity days, nights and even Sundays with a resulting great reduction in production cost per unit. The millers who first learned and thereafter applied this price-production formula virtually revolutionized the milling industry and also for a time made large profits for their own enterprises. They were in the same class with the great industrialists who created the production line.

But it did not long work quite the same way in milling. Converting wheat into flour is a bulk business with a low processing cost relative to the whole per unit value of the product. A miller adds perhaps twenty per cent to the cost of the raw material as against hundreds of per cents added by coverting pig iron into precision machinery. Thus the mass production formula applied less effectively to milling.

Indeed, after a time, it was discovered that in producing flour for commercial bakers it scarcely applied at all. Low price as the sole means of enabling high rate of production proved quite unequal to the task. There came a time, perhaps reaching a sort of all-time high about six years ago, when selling price declined to a point where it did not equal production cost at any rate of mill operation. It was then that a considerable section of the industry literally threw consideration of production cost out of the window and wilfully determined to operate mills on full schedule regardless of cost.

The casualties, known and unknown, soon became very great. Scores of old-established milling enterprises everywhere in the country were driven out of business. Scores of others were grievously hurt and have since been making a courageous fight, with varying results, to retrieve their lost fortunes. There has been a certain amount of self-correction, improvement resulting in some sense from a situation unable to become worse having to stabilize at some point or even get a little better merely through the turning of the wheel of fortune.

This last milling year, the one which for a majority of larger merchant milling establishments closed last week, was much more profitable for the industry as a whole than any other in the past decade. This was, however, due less to acts of members of the industry than to a happy combination of circumstances. The war situation encouraged large purchases of flour for the first months of the milling year, feed prices rose several dollars per ton and, presto, there it was.

Then came the ceiling price deadlock and a virtually total stoppage of volume buying. This was succeeded by the most marked change in conditions in years resulting from the establishment of workable price ceilings, an almost panicky rise in rate of buying and a veritable seller's market. For the first time in a very long period, the whole volume of "big bag" bakery flour trade was sold at a margin over cost of material and manufacture. Millers hardly could believe the evidence supplied by their own eyes, ears and operating accounts.

Perhaps it was due to this lack of faith or, more probably, because of their own lack of experience in selling their products at an actual margin over cost that, having better times in the bag, they failed to tie the bag. For at least six weeks past recoveries on current sales of flour, not only to the bakery trade, which is chiefly being discussed in this comment, but also in family flour trade have been steadily declining. Millers in position to get a broad view of the market in supplement to their own operations, say that margins on flour are down fifteen to twenty cents per barrel and showing greater tendency toward further slipping than toward any degree of recovery.

Unquestionably the seller's market has definitely surrendered, not to the ruinous price level of six months ago but to a point where there is little cheer for millers in looking forward to summer when buyers normally anticipate their requirements for several months ahead. The danger which would accompany the industry's booking any large quantities of flour at present levels, with feed prices at peak and a hundred war hazards in the background, emphasize themselves.

On the other hand, the demand for flour in this country is so assured for months, quite probably even for years, ahead that there is simply no reason why millers should not sanely and sensibly accept slow buying periods for exactly what they are—slow buying periods—and await the turn of the tide. Under no possible circumstances can any of them make undue profit as the result of war conditions. They can, however, and certainly should be able to lay aside their transient fears of dull business, lack of order "backlogs" and all of the other habits and practices of years and take things as they come, particularly since such a course virtually insures a healthy market and a healthy industry for a very long time into the future.

There is neither room nor reason for any sort of price psychosis in the present situation of the flour milling industry.

——BREAD IS THE STAFF OF LIFE——

FELICITATIONS

MILLERS interested in sale of flour to Latin-American countries and, in particular, those directing the affairs of the Flour Millers' Export Association, express satisfaction with the action of the Board of Economic Warfare in freeing flour from the so-called decentralization plan, under which political officials of destination countries are permitted to exercise determining influence in decisions regarding shipping, identities of export sellers and other important matters. It is anticipated that under the individual licensing system with fair allocations of available shipping space, the freedom of trade will be as great as is possible under wartime conditions, especially in the matter of transportation.

It is true that the volume of flour business available in the Latin-American field considered in connection with prices obtainable makes the trade desirable chiefly because of hopes for the future. Some millers, indeed, regard it as costing rather more than it is worth. Nevertheless, not only do we have an economic duty in caring for the needs of our southern neighbors, but it is fair to believe that those millers who today are keeping their connections active and their brands in the markets will some day have a worthwhile trade asset. It was for this very purpose that the Export Association was formed and in the accomplishment of which it is, despite several rough spots in the road, giving excellent account of itself.

Incidentally, our Washington news story on this subject last week contained the somewhat astonishing statement that the Flour Millers Export Association was set up "for the purpose of co-operating with government in *felicitating* the movement of flour to South and Central American buyers." We can recall no more appropriate typographical error in our normally accurate news columns. So, taking our key from it, we felicitate both the officials of the Board of Economic Warfare and of the Association upon the obviously cordial relations which exist between them.

Canadian

CONDUCTED BY A. H. BAILEY
Manager Canadian Branch
Lumsden Building Toronto 2, Ontario
Cable Address, "Palmking"

THE DIMINISHING SURPLUS OF WHEAT

TORONTO, ONT.—Notwithstanding the enormous quantities of wheat still in store in Canada and a reasonable prospect that this year's production will reach somewhere near the estimate for 1943 there are those who visualize a shortage of wheat next year, or not much later than that. The existing supply is going down faster than was at one time thought possible and the pace of reduction may easily accelerate. Certainly, when the full force of the demand for wheat and flour for relief of need in countries devastated by Germany comes into effect available supplies of wheat will be none too much. Shipping will be the sole and only limiting factor.

It is easy to see in this picture a reason for anxiety that the milling industry of Canada should be kept in first class operating condition from now onward. In terms of food value and availability flour will be more easily and more quickly delivered to consumers in the stricken countries than wheat, even if they have the means of converting grain into flour. It may also be assumed that most of the occupied countries which have been subject to German brutalities for any length of time will have been stripped of their own milling machinery and equipment. This will make it impossible for them to do anything with wheat in the meantime or until their mills have been restored.

As yet there is no definite sign that the government of Canada is fully aware of the significance of the foregoing facts in relation to preparedness for what is to come. Urgency of many other matters makes it difficult for authorities to get down to grips with such problems but, on the other hand, time will not be available after the war for things that should be done now. A few comparatively simple changes in existing regulations regarding labor, machinery replacements and the provision of necessary financial means out of current mill earnings are all that the government needs officially to make. Millers themselves will undertake to work out details of arrangements necessary to give force and effect to all requirements in this case. There are really no complexities. As a matter of business it is important for Canada and her farmers that the flour milling industry should now be brought up to a state of highest efficiency and kept there despite current wear-and-tear. A.H.B.

K. A. McLENNAN RETIRES AS ROBIN HOOD MANAGER

VANCOUVER, B. C.—Officials of Robin Hood Flour Mills, Ltd., announce the retirement of K. A. McLennan as western general manager of the company. Mr. McLennan will remain as a vice president and, with headquarters at Vancouver, will also continue as managing director of Terminal Dock & Warehouse Co., Ltd.

T. J. Williams, formerly sales manager of the province of Alberta, has been promoted to be sales manager in Saskatchewan and Manitoba, with headquarters at Moose Jaw, Sask.

W. J. Henning now has his headquarters at Calgary, Alta., he having been appointed sales manager of Alberta in addition to carrying on as sales manager of British Columbia.

—BREAD IS THE STAFF OF LIFE—

FREIGHT ASSISTANCE CONTINUED

WINNIPEG, MAN.—The free freight assistance policy on western grains shipped to eastern Canada and British Columbia for feeding of livestock is to be continued, Agriculture Minister Gardiner has announced. This policy was introduced in October, 1941, and renewed in June, 1942. From Oct. 20, 1941, to last April 30, a total of $14,285,268 was paid against claims for freight assistance by the six provinces concerned.

—BREAD IS THE STAFF OF LIFE—

GRAIN MAN ON HONORS LIST

WINNIPEG, MAN.—R. C. Reece, a past president and prominent member of the Winnipeg Grain Exchange, was included in the King's birthday honors list. He was made an Officer, Order of the British Empire for his patriotic and philanthropic work.

GEORGE WESTON INTERESTS BUY VANCOUVER BUSINESS

VANCOUVER, B. C.—The George Weston interests, headed by Garfield Weston, Canadian-born member of the British House of Parliament, have further extended their interests in western Canada by the purchase of the National Biscuit & Confection Co., Ltd., of Vancouver.

The National Biscuit Co. is one of the largest manufacturers of biscuits and candies in the West. The company reported current assets at Dec. 31, 1942, of $192,615, against which there were current liabilities of $153,874, leaving net working capital of $38,737. The company floated a bond issue in 1930 to erect a six-story reinforced concrete building adjoining the original three-story brick factory building and installation of modern equipment, greatly adding to capacity.

It is reported that expansion of the local plant is planned by the new owner. L. H. Nicholson, founder of the company, will continue as managing director.

The Weston organization has widespread interests across Canada, including a bakery at Victoria, B. C., and the former Cowan-Dodson bakery in this city. The latter is one of the firms operated by Weston's Bread & Cake (Canada), Ltd., of Winnipeg, wholly owned subsidiary of George Weston, Ltd. Another subsidiary in the West is Independent Biscuit Co., Ltd., which manufactures biscuits in Calgary, Alta., and acts as a sales outlet for George Weston, Ltd., and William Paterson, Ltd., of Brantford, Ont., another Weston subsidiary.

From all indications, the 44-year-old magnate, who has purchased the West Vancouver palatial residence of A. J. T. Taylor, intends to make his headquarters in Vancouver and to expand his interests on the Pacific Coast.

—BREAD IS THE STAFF OF LIFE—

SMALL WESTERN MILLS TO GRIND FOR BRITAIN

WINNIPEG, MAN.—Western Canada's small flour mills will be used to grind 5,000,000 bus of wheat into flour for the Imported Cereals Division, British Ministry of Food. This was made known at a meeting of members of the Manitoba Millers Association held here last week.

The members met with F. L. Bishop of the flour advisory board and G. S. Mc Arthur, of Toronto, A. W. Harrison, secretary of the association, announced.

The millers adopted a resolution asking the wheat board to allow a producer to grist 75 bus of his own wheat for personal use, over and above his final wheat quota. Twenty mills were represented at the meeting.

—BREAD IS THE STAFF OF LIFE—

FEES APPLIED TO BARLEY PRODUCTS

WINNIPEG, MAN.—The equalization fees which apply to western grown oats and barley also apply to products manufactured from barley malt, pot and pearl barley, according to the Canadian Wheat Board. The equalization fee, already in effect, to be charged on the export of these products, will be based on the current rate of equalization fee charged for the exports of barley. Pot and pearl barley are under export permit control, and barley malt will be placed under export permit control immediately. Export permits will be required for these products, regardless of the country to which export is made.

—BREAD IS THE STAFF OF LIFE—

$29,537,300 FOR FARM AID

WINNIPEG, MAN.—Assistance given to prairie farmers under the Prairie Farm Assistance Act, Prairie Farm Income Act and wheat acreage reduction in the fiscal year 1942-43 totaled $29,537,300, compared with $59,633,500 the year previous.

MILLS ALLOWED SPECIAL REPAIR PRIVILEGES

TORONTO, ONT.—The Ontario Flour Millers Association reports receipt of a priority rating order issued by Ottawa under which industrial processors, which is assumed to include flour mills, are permitted special privileges in regard to repair, maintenance and operating supplies. Apparently this regulation removes one of the handicaps under which flour mills have been laboring. It is presumed that the country mills of Ontario will now be able to function more fully since they should be able to keep themselves in a better state of repair.

HEAVY GRIND IS REPORTED IN WESTERN CANADA MILLS

VANCOUVER, B. C.—Practically all western mills are now working to capacity, leaving them little or no time to shut down long enough to make necessary repairs following on government requests for fullest output.

No export flour business has been worked through this port for some time, most of the business moving via Atlantic ports to take advantage of the shorter haul to the fighting forces in the Old World. There have been reports of Canadian flour sales to move from Pacific ports but the best information here is that if any of this business is moving, it is being routed via U. S. Pacific Coast ports.

Bakers continue to buy large amounts of flour while store sales are down very considerably. There is no doubt, according to leading flour men, that additional flour sales could be made to bakers if these people could get the necessary ingredients to go along with the flour such as sugar, shortening, etc. In a number of cases some of the smaller bakers have had to close down for a week or so in order to catch up with their sugar quotas. The big bakers are unable to get sufficient ingredients in their cake business.

—BREAD IS THE STAFF OF LIFE—

GRAIN ELEVATOR COMPANIES ENJOY SHARES MARKET BOOM

TORONTO, ONT.—The grain elevator companies of Canada are going through a little boom in the shares market. Most of these stocks have gone up materially since the first of the year, advances amounting to 20 and 25% being shown by favorites. Adverse crop conditions may modify this situation from now on, though the amount of grain held over from 1942 and earlier years insures a substantial volume of storage earnings for some time to come.

—BREAD IS THE STAFF OF LIFE—

LAKE OF THE WOODS TO REBUILD

WINNIPEG, MAN.—Lake of the Woods Milling Co., Ltd., will erect a new flour storage building, a new elevator, office and hammer type chopping house at Portage la Prairie, Man. A $350,000 fire several weeks ago destroyed the company's former mill and other buildings. It is understood the new buildings will be constructed on new property closer to trackage.

—BREAD IS THE STAFF OF LIFE—

SYSTEM OF COUPON BANKING MEETS SUCCESS IN CANADA

TORONTO, ONT.—The system of coupon banking which was adopted in Canada at the beginning of March is working satisfactorily. Under this system dealers in rationed goods operate coupon bank accounts with the regular Canadian banks. Instead of money, coupons are deposited and the account is kept by the bank in terms of coupons instead of money. Withdrawals are made by means

of ration cheques. As a result of this method of handling ration coupons an immense amount of work has been eliminated. Loss and fraud have also been reduced to a minimum.

It is estimated that something like 48,000,000 coupons are used by consumers in Canada every week. This means that without the banking arrangement now being used the cost and confusion of retailing the commodities concerned would be a serious brake on the success of the rationing plan. As other commodities are added to the present list the volume of coupons in use will show further expansion but that does not now worry the authorities as they feel sure the system in use will easily take care of any possible expansion.

——BREAD IS THE STAFF OF LIFE——

HEAVY USE OF WHEAT AS FEED IN WESTERN CANADA

WINNIPEG, MAN.—In its review of the wheat situation for May, the Dominion Bureau of Statistics said heavy use of wheat as feed in western Canada was apparent, with the likelihood of 74,000,000 bus being used for this purpose in the crop year ending on July 31. In addition, 11,000,000 bus will be fed to livestock and poultry in the eastern provinces and British Columbia.

The increased use of wheat as feed raises Canada's estimated domestic requirements for the crop to 162,000,000 bus, a record for the Dominion. A year ago the disappearance for domestic use was estimated at 140,000,000 bus.

——BREAD IS THE STAFF OF LIFE——

MAY GET WHEAT PAYMENTS

WINNIPEG, MAN. — George McIvor, chief commissioner, and R. C. Findlay, comptroller of the Canadian Wheat Board, told the House of Commons agricultural committee recently that there was a prospect that farmers would receive payments on participation certificates on 1940-41 and the 1941-42 crops. Mr. McIvor said there was no profit on the 1939-40 crop, but there were indications the following two crops would yield a profit. The accounts of each crop are kept separately.

——BREAD IS THE STAFF OF LIFE——

CANADIAN FLOUR OUTPUT CONTINUES TO INCREASE

TORONTO, ONT.—The Dominion Bureau of Statistics reports the quantity of flour produced by Canadian mills in April totaled 2,057,355 bbls, compared with 1,960,900 in the corresponding month last year. The figure for April this year was the third largest of the current crop year being exceeded by March and to a small extent by December.

Output for the first nine months of the current crop year ending with April amounted to 17,649,127 bbls, compared with 15,246,534 in the same period of previous crop year. The percentage of output to capacity in April this year was 93.

Grains ground in Canadian mills in April were: wheat 9,098,609 bus, as against 8,688,054 in the same month of 1942; oats 1,170,489 bus, compared with 810,675; corn 168,886 bus, as against 204,871; barley 443,285 bus, compared with 255,997; buckwheat 1,154 bus, as against 1,071, and mixed grain 2,688,887 bus, compared with 2,134,770.

——BREAD IS THE STAFF OF LIFE——

FALL WHEAT PROSPECT NORMAL

TORONTO, ONT.—The present prospect is that Ontario will have a normal production of fall wheat to harvest this year. The acreage is less than last year and the condition of the crop is lower but last year was above average. In any event, the milling of this wheat is adversely affected by the fact that farmers' prices for the local grain are out of line with the cost of western spring wheat. This situation may adjust itself before harvest. Ontario farmers have for years been asking and getting higher prices for their wheat than the value of this grain from a nutritional point of view justifies.

——BREAD IS THE STAFF OF LIFE——

FEED MEETING JUNE 24-25

TORONTO, ONT.—The Canadian Feed Manufacturers Association will hold its annual conference on June 24 and 25. The meeting place is the usual one—Bigwin Inn, Lake of Bays. There will be the usual banquet, golfing tournament and entertainment. The business conference starts early on the morning of Thursday, June 24.

——BREAD IS THE STAFF OF LIFE——

NEW DOW DIVISION FORMED TO SERVE U. S. WAR NEEDS

The organization of a service and development division for development of new chemical products for use now and after the war and to extend the wartime usage of present products and facilities has just been announced by the Dow Chemical Co. This new division will grow just as large as industry requires, Dow officials said. One of its major purposes is the study and further application of standard and new Dow products to industry in the postwar world. D. K. Ballman will be head of the division to be headquartered in Midland, Mich., and which will be staffed by a group of experts selected for their full technical knowledge of Dow products and specific industries. The company has long been doing such work under several separate divisions. Now its efforts will be coordinated and intensified under one head.

"The Dow Chemical Co. has a highly diversified line of more than 500 chemicals which have proven to be indispensable to industry both in peace and war," Mr. Ballman said. "Also an immense number of new products have been synthesized, many of which will without question prove to have extremely important applications. The wartime uses of the former are far from exhausted, and many of the latter have enormous potentialities for America's all-out effort for victory."

——BREAD IS THE STAFF OF LIFE——

BUYS COEUR D'ALENE BAKERY

SPOKANE, WASH.—L. L. Francis, owner of the Silver Loaf Bakery, Spokane, together with his son, Bob, now in the armed forces, and Martin Blum, vice president and production manager of the Silver Loaf company, have purchased the Coeur d'Alene (Idaho) Bakery. The business was bought from B. E. Bentley, who operated it for more than 20 years.

It is understood that the plant will be expanded, not only to care for the needs of regular customers, but also to furnish bread for the Farragut naval training station near by.

The business in Coeur d'Alene will be managed by Keith Gardner, who has been office manager for Silver Loaf in Spokane for 12 years.

——BREAD IS THE STAFF OF LIFE——

FATS ADDED TO PRIORITY LIST

WASHINGTON, D. C.—All fats and oils and their derivatives have been added to the list of products for which priorities can be issued by the War Food Administration. Inclusion of these commodities under the scope of Food Distribution Regulation 1 was effected by amending the term "foods" to include these products. Food Distribution Regulation 1 was issued to enable government agencies, including the armed forces, to obtain food supplies promptly when needed, and to permit the Food Distribution Administration to expedite delivery of food to meet emergency situations for certain civilian users.

The Feed Industry Passes a Milepost

By HARVEY E. YANTIS, IN FEEDSTUFFS

NO better concrete evidence of the arrival of the feed manufacturing industry as a national, well organized economic unit of substantial importance and a sense of industry responsibility could have been furnished than by the wartime conference sponsored by the American Feed Manufacturers Association in Chicago on May 27-28.

It has been obvious to most close observers that the feed business has been growing remarkably in stature during the past six months, but visual evidence of the growth was presented at the meeting, and it was convincing. It is somewhat like hearing by letter from a relative that a 'teen-age nephew is growing like a weed, but until you see him you never fully realize what an adult he has become, and how rapidly.

Feed manufacturers, large and small, have recognized both a joint responsibility and a joint opportunity in the present situation, and have shown a willingness to work together, to accept leadership, in an effort to accomplish objectives beyond any selfish interest.

While the Feed Industry Council is representative of the feed industry as a whole, it had its start in the American Feed Manufacturers Association. The presentation of its work made by Messrs. McConnell, Boling and Hawley; the frank, realistic discussion of the feed and food problems facing the country by Dr. FitzGerald of the Food Production Administration; and the symposium on feed conservation and utilization conducted by a panel of outstanding nutritionists, could not be absorbed by a listener without the reaction that here was a conference —and an industry—rising to meet a challenge. Individually, the manufacturers have a strong and natural desire to keep their plants operating profitably, but we doubt if anyone who sat through the conference with an open mind could have said with honesty that he believed the dominating motive of this meeting was selfish. The good of the country came first, the good of the industry second, and the good of the individual third.

An unusually large number of leaders from agricultural colleges and experiment stations were in attendance at the conference, and participated in the discussions both with suggestions and criticisms. This, too, was a harbinger of a sounder industry, with larger benefits to agriculture. College men and feed men must work together with mutual confidence if the efforts of either are to be fully productive. Both groups are reaching an understanding of this fact.

The feed industry has progressed. It has men and companies of high calibre, in numbers sufficient to dwarf those relatively few of its members who lack integrity and vision. But also, as it grows, it has heavier responsibilities, a greater necessity for exerting its strength, intelligence and energies toward the principal goal of helping to build a more profitable, efficient agriculture, of aiding in the production of nutritious food economically. If it continues to meet those responsibilities, it will have honor and it will have profit, and it will deserve both. If, by chance, it should hold its own profit and success above the agriculture it serves, the industry will decline rather than expand, and it will deserve that, too. This emergency is presenting the feed industry with a great opportunity; there was every indication at the Chicago conference that the industry has the ability to rise to it.

First Woman

WICHITA, KANSAS.—The difficulty of the wheat farmers of Clark County, Kansas, in getting help to harvest this year's crop is foreshadowed by the fact that the farm bureau has employed a woman, Miss Ruth Ingler, as county farm agent. She is said to be the first woman of record to hold this job. She came to Kansas from Ketchikan, Alaska, and while Alaska is not famed for its wheat and Clark County is an important wheat producer the farmers believe she will be all right.

She was first employed as home-demonstration agent early this spring. Then the county farm agent was drafted into the army. Unable to find another man for the job, the farm bureau employed Miss Ingler and she took over on the condition that when she could not help a farmer with his problems, she could call on some one in the county, expert in the line concerned. Then, too, the county agent is required to do a lot of book work brought on, first by the AAA and now by the war. Miss Ingler knows all about the book work and the farmers say she is doing right well as a farm adviser.

Stuffed Straights

FROM THE MANAGING EDITOR'S SIFTER

By Carroll K. Michener

THE MEN WHO MAKE THE FLOUR.—There's quite some accumulation of history behind the forty-eighth annual convention of the Association of Operative Millers, which is assembled this week in Kansas City. First active steps toward organizing this association were taken in 1895, but it was not until January of the following year that they were completed. The name adopted was the Fraternity of Operative Millers of America, but this was changed in 1919 to the present form.

The first convention (1896) was held in Chicago, with B. W. Dedrick, the first president, presiding. Annual conventions have been held each year since then. This year's is the eighth that has gone to Kansas City. Only one other city has had more—the 1941 meeting was the ninth for St. Louis.

Long before the association was formed, head millers felt the need for some kind of an agency that would place them in contact with others in their line of endeavor. They had no one with whom they could discuss their mechanical problems, outside of the engineers of the mill machinery companies, and what they wanted was an opportunity to talk things over with those who were facing the same problems as themselves. In several cities head millers used to meet at each others' homes of a Sunday evening, and exchange information of mutual benefit. These little gatherings were the forerunner of the association.

The founding fathers endeavored to keep the association free of labor entanglements. It was organized primarily for educational purposes, and not for the aggrandizement of labor. This intention has been respected throughout the years. In 1933, when the government sought information on which to base a code for the milling industry, the Association of Operative Millers, being the only organization in the field in direct touch with labor conditions, drew up certain recommendations which were presented at the code hearing. The association merely acted as a spokesman for the operatives.

It has been pointed out repeatedly that, notwithstanding the importance of milling in American industry, there is not a single institution in the country devoted exclusively to the study of advanced milling practice and technology. Innumerable other lines of endeavor, not all of them as important as milling, have their institutions for scientific research, supported, in the main, by the manufacturers interested. Yet it remained for the operative millers themselves to institute the needed research, and this has been practically the sole purpose and endeavor of their association since its inception.

Few mill owners ever have given any pronounced indication that they realize what an asset they have in the Association of Operative Millers. These few usually confine their attention to okaying the convention-going superintendent's expense account. But there are some who know from experience that their men return with increased knowledge of their work and that it pays dividends. A great many others do not interest themselves in the association at all.

B. W. Dedrick, the first president, said at the 1933 convention: "This association has been almost wholly responsible for our great advancement in milling, not alone in the mechanics of milling and flour manufacture, but in the growth and use of chemistry as a concomitant to or of milling, for during our early career as an association we fostered and encouraged laboratory practice. The prime objective in the founding of the association was the education and training of the miller, and eventually the establishment of a millers' school or college, and among the important subjects to be taught were cereal chemistry and bread baking. I know, because I promulgated that idea when I proposed the establishing of an association of millers a year or two before we actually organized."

Unhappily the full outline of this educational goal never has been realized. Under Professor Dedrick, Pennsylvania State College attempted a milling school, and at Manhattan, Kansas, a more successful institution of this kind was erected. But the milling industry has still to do for itself what its technical men set down as a reasonable and desirable goal half a century ago.

At that first meeting in Chicago were only a handful of the 225 members who had signed up in response to 1,500 letters and postcards. A tentative constitution was devised, and also an official emblem consisting chiefly of a pair of crossed rolls beneath a millstone. When the association met in the following year, again at Chicago, 17 millers and 7 allied men were present. In the treasury was a balance of $206.20. W. P. Stack, Dowagiac, Mich., was elected to succeed Mr. Dedrick in the presidency, and G. W. T. Seifert, DuQuoin, Ill., became secretary. The first Kansas City convention was held in 1900. Other convention cities have included Minneapolis, Milwaukee, Indianapolis, Evansville, Memphis, Detroit, Louisville, Buffalo (all-time record attendance of 1,866 in 1914), Cincinnati, Denver, Dallas, Seattle and Toronto.

ON THE REVERSE SIDE.—There are at least two versions of everything, since no two peas are alike in the same pod, and even truth is approximate. The story John D. Rafert, president of the Rafert Baking Co., Minneapolis, tells of his recent "run-in" with the OPA is vastly different from what appeared in the daily press. According to the news stories, Mr. Rafert pleaded guilty to selling a large quantity of unenriched bread, at enriched bread prices, to the Red Owl Stores, Northwest grocery chain.

Mr. Rafert says he pleaded guilty on advice of his attorneys, pending investigation by the OPA. The investigation, he feels sure, will absolve him of all blame. According to Mr. Rafert, an error of over 100,000 loaves of enriched bread was made in the Red Owl count by the OPA. The bakery was running seven to nine restaurant doughs a day, during the football season last fall when the trouble started. At that time restaurant bread was not enriched, but through some error, the bread was labelled "Mother's Bread," an enriched loaf, instead of restaurant.

The newsboys who have attended Mr. Rafert's turkey dinners on Thanksgiving Day would feel pretty much upset, probably, if Mr. Rafert had to go to jail. There are some big-time millers, too, who look on with sympathy, for their restraint-of-trade case is still on the docket of federal court.

Lt. George Cassleman, previously a Washburn-Crosby salesman in Chicago, is now in the executive office of one of the Navy's new three and one-half million dollar destroyer escorts. The name of the ship is the U. S. S. Pillsbury . . . well, after all, we have a historical, though not a naval, precedent. A generation ago there was a Pillsbury-Washburn Flour Mills Co., Ltd.

. . . Apparently one of the serious manpower complications in the grain processing industries has to do with car loading. Attention was brought to this by Frank J. Allen of Bay State Milling Co., Winona, when he reported employee problems to the recent annual gathering of the Millers National Federation. He said the turnover among car loaders was great. Those extra top rows of sacks in a 60,000-lb car constitute a breaking point. Only tough hombres can or will take it. The large increase in hospital cases is said to be directly chargeable to increased car loadings. . . . Entertaining sidelight: At a meeting of elevator superintendents in Chicago some one was wondering aloud if women car loaders would do the trick. One answer was that colored women could and would keep up with male help, but that white women could do only from a half to two-thirds the volume of work done by men. Russell B. Maas of Screw Conveyor Corp., Hammond, Ind., said his firm had found that the efficiency of women, taken on all around work, was about 75% that of the masculine gender. . . . In a Minneapolis mill the women's wage scale by agreement with the union boys is on the basis of 80% efficiency.

. . . Well, the shortening problem has been solved. An Associated Press dispatch from Griffin, Ga., tells us all about it. It seems that in a Georgia state laboratory it's been established that peanuts can pinch hit for meat, butter, lard and milk— that is, in special jobs. . . . "It's been known for some time," states the news item, "that peanut butter could be used in shortening, and thereby reduce the amount of butter and lard used in recipes. But it never had been established that peanut butter could do the *whole* job." . . . Proof that peanuts now go all-out for ersatz is declared to be the eight baking recipes devised by a young University of Georgia gal, Helen Thompson, who will mail the recipes to all askers. Address her at the Georgia Experiment Station, Griffin.

Mr. W. A. Mabane, parliamentary secretary to the British Ministry of Food, recently referred to British war bread as the "best in Europe." It is also the only unrationed European loaf. If British bread were rationed, said Mr. Mabane, it would have to be on a differential basis, and that would be a very thorny matter. Each person, presumably, would have to be calibrated as to his needs—one-slice, two-slice, etc.—and labelled accordingly. We feel sure our OPA could work out a very complicated formula for it.

. . . Canadian members of the American Association of Cereal Chemists quite naturally feel that once in a while the association should meet in the Dominion. They are very active in the society's affairs. Eleven representatives attended the recent convention in St. Louis. Douglas Stone, chemist for the Lakeside Milling Co., Toronto, made an appeal for "Victory Year in Toronto 1942" This slogan was bannered prominently in the convention hotel. While it was recognized that a wartime meeting in Canada was out of the question, the Canadian delegates could see no good reason why the first peace year convention should not go north of the border. The last and only meeting of this association to be held in Canada was in 1934.

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"Thoro-Bread"
(Diastatically Balanced)

A very fine, strong, altogether uniform and dependable flour

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STERLING, KANSAS

"Hunter's CREAM"
A Kansas Turkey Wheat Flour
that for more than sixty years has stood at the very top of the fine quality list.
The Hunter Milling Co.
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"OLD SQUIRE"
Always is good flour. Pays no attention to ups and downs and this and that.
Just always GOOD FLOUR
Moore-Lowry Flour Mills Co.
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STANDARD MILLING COMPANY
Millers of
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Pure Soft Winter Wheat Flour
GREENSBURG, IND.

MINER-HILLARD MILLING CO.
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Manufacturers of
Wheat, Rye, Corn and Buckwheat Flours

CANNON VALLEY
is manufacturing one of the outstanding flours made in Minnesota. A perfect flour, laboratory controlled. Many of our old customers and some of our new connections have written us voluntarily that they have never had so many favorable comments. We can please the most exacting.

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Milled from Carefully Selected
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"DIAMOND D"
A High Grade Baker's Spring Patent
Milled Under Laboratory Control from Montana Spring Wheat
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CASH IN ON CAKES..
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CAKE FLOURS
– get guaranteed uniformity, finer texture, better keeping quality.
THE HENKEL FLOUR MILLS
DETROIT, MICHIGAN
Buy War Bonds and Stamps

"SUNNY KANSAS"

A grand flour to take on when some other flour has not worked so well.

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WICHITA FLOUR MILLS COMPANY
WICHITA, KANSAS
2,500 BBLS DAILY

WHEAT
Any Grade—Any Quantity—Any Time
BUNGE ELEVATOR CORPORATION
MINNEAPOLIS, MINN.

"ROCK RIVER" RYE "OLD TIMES" BUCKWHEAT
"BLODGETT'S" RYE
All Grades—From Darkest Dark to the Whitest White
—Specially Milled by the Blodgett Family—Since 1849
FRANK H. BLODGETT, Inc., Janesville, Wisconsin

EVANS MILLING CO.
INDIANAPOLIS, IND., U. S. A.
Manufacture Kiln-Dried WHITE CORN PRODUCTS
Capacity, 16,000 Bushels

MOSTLY PERSONAL

CRITICAL SITUATION

G. Edmondson, buyer for Marshall (Texas) Mill & Elevator Co., visited the grain trade in St. Louis and Kansas City last week, and while in the fringe of the corn belt found out first hand just how critical the situation is. One of the largest buyers of coarse grains and feed ingredients in the country, Mr. Edmondson said that it is becoming increasingly difficult to operate in his area because of the extreme shortages which are forcing feed mills to turn away needy buyers.

CHICAGO STOPOVER

A. J. Oberg, King Midas Flour Mills, Minneapolis, stopped off in Chicago, June 4, on his return from a three weeks' business trip to the East.

CHICAGO VISITORS

C. Graham McGuire and D. R. Evans, Hubbard Milling Co., Mankato, Minn., were among Chicago visitors last week.

OKLAHOMA CALL

Herman Steen, Millers National Federation, Chicago, attended the meeting of the Oklahoma millers last week in Oklahoma City.

AT NUTRITION MEETING

W. Floyd Keepers, Millers National Federation, Chicago, attended a nutritional meeting last week in Alabama.

FLYING TRIP

John F. Reilly, of the H. S. Pearlstone Co., New York flour brokers, left by plane on June 6 for a two weeks' trip to visit the firm's mill connections in the North and Southwest.

LEGION COMMANDER

Fred A. Kuhlmann, manager of the Continental Baking Co., Ogden, Utah, has been named commander of the Herman Baker Post, No. 9, of the American Legion.

NO BUYING INTEREST

T. L. Brice, director sales of baker flour for the Burrus Mill & Elevator Co., Fort Worth, Texas, visited New Orleans recently. Bakers showed no interest in buying, he reported.

ALABAMA TRIP

W. P. Craig, W. P. Craig & Co., Atlanta flour broker, made a two weeks' trip through Alabama, finding the family flour business very quiet.

CROP REPORT

A wheat crop not to exceed 125,000,000 bus is the estimate of A. L. Jacobson, head of the Arnold Milling Co., Sterling, Kansas, who spent last week touring western and southwestern Kansas, examining fields and interviewing farmers and elevator operators. They can't explain the drop, Mr. Jacobson says, but the uniform feeling is this is not a wheat year.

MILITARY MANEUVERS

Miss Betty Bowley, of THE NORTHWESTERN MILLER'S Kansas City office, has been spending a fortnight at West Point where she has seen her brothers, Freeman and John, together with 514 other cadets, become second lieutenants. Her brothers will join the army air corps at once, and probably will be assigned to four-motored bombers. Another brother is entering the academy in the next class. Miss Bowley's father, Colonel F. M. Bowley, is in charge of properties at the academy. Before she returns to Kansas City, Miss Bowley will visit her uncle, Lieutenant General Albert J. Bowley, retired, who lives in Baltimore. Miss Bowley will be thoroughly militarized when she gets back to her typewriter.

AT TOLEDO MEETING

Members of the grain trade at Toledo who attended the meeting of the Ohio Grain, Mill and Feed Dealers Association of Cincinnati, June 7-8, included Sam Rice, Rice Grain Co., who is president of the Grain and Feed Dealers' National Association and is on the program; M. H. Faulring, Archer-Daniels-Midland Co. and president of the Toledo Board of Trade; A. E. Schultz, secretary of the exchange; Paul Atkinson, Norris Grain Co; D. L. Norby, Cargill, Inc; G. R. Forrester, G. R. Forrester Co; P. M. Barnes, Lansing Grain Co; L. J. Schuster, L. J. Schuster Co; and H. W. Applegate, Mennel Milling Co.

TOUCH AND GO

With the return of Assistant Sales Manager T. E. Higley from a trip to central and eastern territory, Fred Burrall, general sales supervisor for the William Kelly Milling Co., Hutchinson, Kansas, left for a brief visit with the central states trade.

PRODIGAL SON

Paul Gano, one of the early day grain brokers in Hutchinson, who deserted the trade nearly 20 years ago to engage in motor car business, has returned to be associated with his brother, George E. Gano. Paul Gano has been with an oil company more recently. He has been admitted to membership on the Board of Trade.

FISH STORY

Harold Harris, of the Davidson Grain Co., Hutchinson, Kansas, will get some kind of an award for most novel alibi for a black eye. His explanation for the shiner runs like this: He was tugging at a line on the end of which was an oversize channel catfish. Suddenly the hook tore away and in the snap-back the lead sinker struck Harris' eye.

HEADS CREDIT GROUP

Lawrence Alexander, General Mills, Inc., was recently elected president of the Bluefield (W. Va.) Association of Credit Men.

AT HEADQUARTERS

Leo F. Lichten, Florida representative of the Valier & Spies Milling Co., was a caller at the mill's office last week.

NEW YORK VISITORS

I. C. Maghran, eastern manager, bulk products sales, at Buffalo, for the Pillsbury Flour Mills Co., Minneapolis, visited the New York offices on a recent business trip.

Willard H. Hagenmeyer, sales manager for the Henkel Flour Mills, Detroit, and Gordon Clark, production manager at the Buffalo mill of International Milling Co., Minneapolis, made the company's New York offices their headquarters during recent stop-offs in Gotham.

Gordon B. Wood, vice president and sales manager Midland Flour Milling Co., Kansas City, called at the New York offices of THE NORTHWESTERN MILLER, while covering eastern flour markets.

MINNEAPOLIS VISITOR

William E. Derrick, regional vice president at New York for the Pillsbury Flour Mills Co., is a Minneapolis visitor.

INSPECTS PLANT

J. I. Gates, president of the J. I. Gates Milling Co., Columbus, Ohio, representing Atkinson Milling Co. in Ohio and part of West Virginia, visited the Minneapolis plant last week for two days, inspecting the new bin-aging facilities.

—BREAD IS THE STAFF OF LIFE—

United States Grain Stocks

Commercial stocks of grain in store and afloat at the principal markets of the United States at the close of the week ending May 29, 1943, and May 30, 1942, as reported to the United States Bureau of Agricultural Economics, in bus (000's omitted):

	American		Canadian in bond	
	May 29 1943	May 30 1942	May 29 1943	May 30 1942
Wheat	173,113	221,805	8,448	16,302
Corn	24,173	64,408	....	....
Oats	8,763	3,766	1,976	2
Rye	22,654	17,240	868	1,341
Barley	8,705	4,541	1,187	27
Flaxseed	945	1,703	295	...

Stocks of United States grain in store in Canadian markets May 29 (figures for corresponding date a year ago given in parentheses): wheat, none (175,000 bus); corn, 3,456,000 (4,016,000); oats, none (none); rye, 24,000 (24,000).

Bonded Grain in the United States

Bonded grain in the United States June 5, in bushels (000's omitted):

	Wheat	Oats	Rye	Barley
Baltimore	456	...	...	...
Boston	763	...	...	...
Buffalo	1,894	1,930	111	1,201
New York	929	...	...	...
Afloat	888	...	...	...
Philadelphia	755	...	...	...
Lakes	62	76	...	276
Totals	5,747	2,006	111	1,477
May 29, 1943	7,407	1,628	111	1,231

• NEW A.F.M.A. HEAD •

Arthur F. Hopkins, of the Chas. M. Cox Co., Boston, recently was elected chairman of the board of directors of the American Feed Manufacturers Association. He succeeds John B. DeHaven, of Allied Mills, Inc., Chicago, who had served two terms. Mr. Hopkins long has been active in feed industry affairs, and has been a member of the board of directors of the American Feed Manufacturers Association for several years.

OBITUARY

FRANK J. KOVARIK

Frank J. Kovarik, head of the Excelsior Milling Co., flour and feed jobbing concern of Minneapolis, was found dead in his sister's home on June 4. Mr. Kovarik was 57 years of age, and had been in poor health for some years. He was born in New Prague, Minn., and started working in the mill there 43 years ago. In 1919 he moved to Minneapolis, where he developed and managed the business of the Excelsior Milling Co. Surviving are his widow, a sister, and two brothers, one of whom, John J. Kovarik, is vice president and manager of the Buffalo plant of the International Milling Co.

MRS. L. L. CONRAD

Mrs. L. L. Conrad, wife of Colonel Lawrence L. Conrad, former manager of the Minneapolis branch of the Bemis Bro. Bag Co., died at her home in Minneapolis June 6. Besides her husband, Colonel Conrad, who is officer in command of the third district, seventh service command, Missouri, Mrs. Conrad is survived by three sons, Captain Lawrence L., Jr., Staff Sergeant Edwin M., and Frederick D., who is in the ROTC. Funeral services were held from St. Paul's Episcopal Church, burial in the National Cemetery at Fort Snelling.

HARRY R. SHEPARDSON

Harry R. Shepardson, former manager of the Minneapolis plant of the Loose-Wiles Biscuit Co., died June 6. Mr. Shepardson, who was in his early 80's, has been retired for a number of years. He is survived by his widow, one son and two daughters.

CHARLES H. WILLIAMSON

Charles H. Williamson, 75, a veteran in grain and shipping circles, died June 5, at Buffalo. He had been connected with various railroads, Lunham & Moore, grain forwarding company; Williamson Forwarding Co., and the Hecker Elevator.

OATMEAL MARKETS

Toronto-Montreal: Demand for rolled oats and oatmeal is light. Warm weather has reduced consumption to a low point. Prices are unchanged. Quotations, June 5: rolled oats $3.15 per bag of 80 lbs, in mixed cars; oatmeal, in 98's jute $3.80 bag, Toronto-Montreal basis.

Winnipeg: Rolled oats and oatmeal in moderate demand; sales all domestic. No export business reported for a long time. Supplies light. Quotations, June 5; rolled oats, in 80-lb sacks, $3.25 in the three prairie provinces; oatmeal, in 98-lb sacks, 20% over rolled oats.

Minneapolis: Rolled oats were quoted on June 7 at $4.25 per 90 lbs, bulk; 20-oz packages $2.20 case, 48-oz packages $2.35.

—BREAD IS THE STAFF OF LIFE—

Millfeed Futures Open Interest

Following table shows open contracts at Kansas City and St. Louis on June 7, in tons. This is the short side of contracts only, there being an equal number of tons open on the long side.

	Kansas City Bran	Shorts	St. Louis Shorts	*St. Louis Bran	Midds.
June	...	...	360	960	...
July	120	...	...	480	...
Totals	120	...	360	1,440	...

*Delivered in Chicago.

Millfeed Receipts and Shipments

Receipts and shipments of millfeed at the principal distributing centers for the week ending June 5, in tons, with comparisons:

	Receipts 1943	Receipts 1942	Shipments 1943	Shipments 1942
Minneapolis	...	...	12,330	8,675
Kansas City	1,620	1,975	3,990	5,325
Philadelphia	360	580	...	...
Milwaukee	...	...	2,460	3,160

U.S. CROP CORPS
Certificate of Service
Awarded to
For patriotic service on a farm or in a food processing factory
WAR FOOD ADMINISTRATOR
CHAIRMAN, WAR MANPOWER COMMISSION
STATE DIRECTOR OF AGRICULTURAL EXTENSION
DATE
FOOD FOR FREEDOM

Flour and Feed Mill Workers Eligible for Crop Corps Awards

WASHINGTON, D. C.—Full-time and part-time employees of feed manufacturing plants and flour mills will be entitled to receive U. S. Crop Corps certificates of service, which were designed primarily for persons recruited for work on farms and processing plants in response to the call of the government for additional manpower, the agricultural division of the Bureau of Placement of the War Manpower Commission has ruled.

"Flour mills, of course, are food processing plants, but equally entitled to the certificates will be employees of feed manufacturing plants," said an official of the Bureau of Placement, in announcing that distribution of the certificates had been expanded. "Without feed for livestock, we will be unable to increase production, for if we have no livestock we will have no food, so workers in feed plants are justly entitled to these certificates," the official continued.

It was made plain that the government desires to reward all workers in food processing and feed manufacturing plants for their efforts in contributing to the "food for victory" campaign. The certificates will be available not only to "recruits" who come into commercial plants to augment the regular staffs, but all regular employees will also be eligible for them.

The certificates are now being printed by the Government Printing Office and will be distributed to local offices of the United States Employment Service throughout the country within a short time, it was said. Their distribution to individuals will be handled by local offices either by delivering them to workers entitled to them, or perhaps through employers furnishing the local offices with data on the individuals they employ, and in turn the local employment or placement office will furnish the plant executives with an adequate supply to care for their roster of employees.

The certificates are to be awarded "for patriotic service on a farm or in a food processing factory" and will bear the signatures of Chester C. Davis, War Food Administrator, and Paul V. McNutt, chairman of the War Manpower Commission, and the state director of agricultural extension. Each copy will be suitable for framing.

——BREAD IS THE STAFF OF LIFE——

DENIES STATEMENT ON BISCUITS

WASHINGTON, D. C.—The flaming headlines of a Washington, D. C., newspaper, attributing to Dr. Russell M. Wilder, head of the civilian food requirements branch of the War Food Administration, the statement that the baking of biscuits is unpatriotic because fat is needed for explosives, brought forth this correction from Dr. Wilder today:

"The statement attributed to me is not a correct quotation. I have repeatedly emphasized the using of fats as economically as possible in the manufacture of baked products and home baking, and some one may have inferred that I said the baking of biscuits was unpatriotic. Such is not the case. But I do believe that the baking of biscuits should be done with the most economical use of fats."

W. R. BALLEW TAKES NEW JOB

KANSAS CITY, MO.—W. R. Ballew, for the last 18 years representative for MFA Grain & Feed Co., has resigned to join his former associate, Frank Farnen, in the latter's grain company in the Kansas City Board of Trade. Mr. Ballew, whose home is in Mexico, Mo., will continue to call on the trade he knows so well in that state.

——BREAD IS THE STAFF OF LIFE——

WASTE MANILA ROPE MAY BE USED IN BAG AND TAG PAPER

WASHINGTON, D. C.—Waste Manila rope may be used in manufacture of flour and cereal products paper sacks through an amendment of WPB Conservation Order M-294. The order also allows use of waste rope for tag papers. Announcement was made June 8 by WPB.

——BREAD IS THE STAFF OF LIFE——

CHICAGO CLUB GOLF PARTY

CHICAGO, ILL.—The Bakers Club of Chicago will hold its first golf party of 1943 at Rolling Green Country Club, Arlington Heights, Ill., June 29. An all-day program is being planned, and the cost of the ticket for golfers will be $6, which includes lunch, dinner and green fees. The fee for nongolfers will be $5. The committee making the arrangements consists of W. Jaeger, Anheuser-Busch, Inc., chairman; H. E. Bear, Bear-Stewart Co; George Burny, Burny Bros., Inc; S. A. Kretchman, Elgin Foods, Inc; O. C. Lockwood, Deppe Baking Co.

——BREAD IS THE STAFF OF LIFE——

LAKE CARGO SPACE CUT TO MOVE GRAIN AND ORE

WASHINGTON, D. C.,—The government on June 1 cut back sharply vessel space allocations for all commodities moving on the Great Lakes other than grain and iron ore, to permit the maximum space for these two products in the shortened season of navigation.

In order to provide vessels to move 135,000,000 bus of American grain and Canadian wheat to be bought by Commodity Credit Corp. for feed, along with 91,000,000 tons of ore, War Production Board cut back all other movements, some drastically, others less so, but all below last year's traffic.

Bad Weather Hinders Shipping

DULUTH, MINN.—Shipping on the Great Lakes has returned to normal after a period of rain, fog and heavy storms that caused damage to a dozen ships and loss to one. The major accidents were collisions between two large freighters, while others received damage in hitting piers while docking or getting out because of the wind and foggy conditions.

Receipts to Be Allocated

BUFFALO, N. Y.—Buffalo's largest receivers of lake-borne grain at a meeting in the Corn Exchange, June 4, adopted a procedure for dividing among themselves their portion of the 135,000,000 bus of grain which the ODT expects to move to lower lake ports this year under the wartime control of shipping.

Certain portions of the receipts, as yet undecided, will be allocated the milling, feedstuffs and linseed oil industries. These industries, in turn, will agree among themselves how the grain will be allocated to various processing facilities.

The result of this meeting and subsequent meetings is expected to have a big bearing on the short-term future of Buffalo's flour and feed industries. Feed concerns for months have complained of shortages of grain. Flour millers have been little affected as yet, but a shortage of grain would have serious consequences for the trade. Grain interests in the Northwest are organizing an Upper Lakes Grain Committee which will cooperate with the Lower Lakes group in recommending allocations.

——BREAD IS THE STAFF OF LIFE——

FLAXSEED FOR PLANTING PRICE CONTROL EXEMPT

WASHINGTON, D. C.—On June 1 flaxseed to be sold and used for planting 1943 crop was exempted from price control by the OPA, which said it was not intended to bring seed flaxseed under Regulation 297. OPA amended regulations also to provide handling charge at terminal elevators from 3c gross bu to 3c net bu to bring it in line with established trade practice.

FOOD TECHNOLOGISTS DISCUSS WAR TOPICS

Problems Aired at Conference in St. Louis—Speakers Stress Importance of Dehydration

ST. LOUIS, MO.—Wartime food problems held the spotlight at the fourth conference of the Institute of Food Technologists in St. Louis June 2-4.

Colonel Rohland A. Isker, Quartermaster Corps, who is in charge of the army's progressive Subsistence Research Laboratory, and largely responsible for the army's efficient "K" ration, presented some of the food problems of the army in an address, "Types of Food Needed by the Armed Forces." Colonel Isker told about the handling, storage, and transportation difficulties which food for overseas troops must be able to withstand, and also stressed the fact that such food must retain its nutritional value much longer than food prepared for civilian consumption.

Dehydrated foods, so necessary for feeding troops under modern warfare conditions, were discussed by Dr. Bernard E. Proctor, associate professor of food technology, Massachusetts Institute of Technology. Dr. Proctor, who is in charge of the M.I.T. Food Technology Laboratories, is a consultant on food for the Office of the Quartermaster General, U. S. Army.

Dr. Proctor explained that the space equivalent of thousands of ship cargoes will be eliminated this year in transporting supplies because of proper compression techniques. "The limits of compression vary widely with different types of foods," he said, "but special care must be taken that the compressed food will retain its original texture, flavor and cooking qualities on rehydration." Powdered eggs and milk, flour and oatmeal were among the products mentioned by Dr. Proctor which have already been pressed for packaging.

Speaking on the "Dehydration of Eggs," Harry E. Goresline, Bureau of Agricultural and Industrial Chemistry, told members of the Institute of Food Technologists the effect that war conditions are having upon the dehydrated egg industry.

"The shortage of shipping space has brought about radical change in many of our food processing methods," Mr. Goresline stated. "There has been an expansion of the dried egg industry from about 10,000,000 lbs per year to around 375,000,000 lbs because this method of preservation has met the need for the saving of shipping space and the product lends itself to storage as a reserve food supply."

"Control of Fat Deterioration" was the subject of an address given by Dr. George E. Holm, Chief Division of Dairy Research Laboratories, Bureau of Dairy Industry, Agricultural Research Administration, U. S. Department of Agriculture.

"Spoilage of fats," said Dr. Holm, "is the result of enzyme action or of oxidation, or both. The former is not difficult to prevent in most cases, while the latter can be prevented completely only by exclusion of oxygen. The amount of oxygen necessary to cause fat spoilage varies with the type and amount of unsaturated acids present."

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WAMEGO, KANSAS

Millers of Kansas Hard Wheat Flour

HIGH CLASS BROKERAGE CONNECTIONS DESIRED

Flour Ceiling Order

(Continued from page 16.)

set forth in column 1 subdivision (f) of this section.

(e) The maximum price per hundred weight bulk may be increased for buyer's containers other than 100-lb cotton sacks by the differentials set forth in column 2 of subdivision (f) of this section.

Size (lb)	Container—Kind	Column 1—Seller's packages, charge per cwt over 100-lb cotton carload price	Column 2—buyer's packages, charge per cwt over bulk price
200	Wood or plywood	$0.625 over cwt basis	$0.125
100	Wood or plywood	$0.95 over cwt basis	.20
140	Jute	Same as basis	None
100	Jute	Same as basis	None
140	Cotton	$0.025 over cwt basis	None
100	Cotton	Basis	None
50	Cotton	$0.125 over cwt basis	$0.02
25	Cotton	$0.25 over cwt basis	.04
10	Cotton	$0.50 over cwt basis	.10
5	Cotton	$0.85 over cwt basis	.20
2	Cotton	$1.75 over cwt basis	.50
100	Paper	Same as basis	None
50	Paper	$0.05 over cwt basis	$0.02
25	Paper	$0.10 over cwt basis	.04
10	Paper	$0.30 over cwt basis	.10
5	Paper	$0.575 over cwt basis	.20
2	Paper	$1.35 over cwt basis	.50
1¼	Any type	$1.75 over cwt basis	.70

	Cents per cwt additional
Outside jute envelopes (1 to cwt)	17½
Outside jute envelopes (1 to cwt)	22½
Outside jute envelopes (2 to cwt)	30
Outside cotton envelopes (1 to cwt)	25
Outside fiber containers (2 to cwt)	22½
Outside paper envelopes (1 to cwt)	15
Outside paper envelopes (2 to cwt)	17½
Outside paper envelopes (4 to cwt)	25
Other outside containers	actual cost

A. Charge for handling and packing buyer's outside paper, cotton, or jute envelopes, 5c.

B. Charge for handling and packing buyer's fiber containers, 7½c.

(g) For any other kind of seller's containers, the maximum price shall be the maximum price per hundredweight bulk plus the actual cost of packages, labels and shipping containers and plus the differential set forth in column 2 of subdivision (f) of this section for the size nearest the size in question.

(h) The provisions of subparagraphs (d), (e), (f), and (g) of this subdivision XVI of this Appendix A shall have no application to family cake flour, family whole wheat flour and family farina sold in packages of 5 lbs or less as provided for in subdivision VI of this Appendix A.

3. Section 1351.1666 (XVII) is added to Maximum Price Regulation 296 and reads as follows:

XVII. **Use of railroad rates in calculations.** Wherever in this regulation maximum prices are determined by adding a railroad transportation charge to a basic price, said railroad transportation charge shall be calculated by using the railroad rates in effect prior to May 15, 1943, until

(a) August 1, 1943, for prices which include a charge from Enid, Oklahoma; Kansas City, Missouri; Omaha, Nebraska; Memphis, Tennessee; Cairo, Illinois; Evansville, Indiana; Louisville, Kentucky; Gincinnati, Ohio; Sterling, Colorado; or Ogden, Utah, and for prices which are calculated by deducting from the basic price the transportation charge from the milling point to New York City and then adding the transportation charge to the destination; and

(b) September 1, 1943, for prices which include a charge from Minneapolis, Minnesota; Billings or Great Falls, Montana; or Spokane, Washington.

After August 1, 1943, and September 1, 1943, the railroad rates then applicable shall be used in so calculating said maximum prices.

This amendment shall become effective June 11, 1943.

Wallpaper Paste Exempt

WASHINGTON, D. C.—In amendment No. 3 to MPR 296, the OPA June 4 exempt from this maximum price regulation sales of wallpaper paste and sales of flour to U. S. agencies, where the seller has purchased an equivalent amount of wheat from any U. S. agency at 100% of wheat parity.

The latter action may foreshadow direct allocation of government-owned wheat stocks to mills for grinding flour or other products for government agencies. Such an arrangement presumably would protect federal purchases against any wheat market squeeze that might temporarily halt flour sales.

Wallpaper paste was removed from price control because of its negligible relationship to the cost of living. Sales of dry corn milling products for this purpose likewise were exempt.

Section 1351.1659 of MPR 296 was amended to read as follows:

"1351.1659 *Exempt sales.* This maximum price regulation shall not apply to: (a) sales, deliveries or transfers of wallpaper paste; (b) sales, deliveries or transfers of flour from wheat, semolina or farina to the United States or any agency thereof: *Provided,* That the seller has purchased an equivalent amount of wheat from the United States or any agency thereof at prices computed at 100% of parity by the United States Department of Agriculture.

This amendment shall become effective June 10, 1943.

SEMOLINA MARKETS

Minneapolis: Grain market is stronger, and durum, should it advance another cent or so, would pierce the ceiling and put mills out of the market again. Notwithstanding this, inquiry is light. A little new business, of course, goes on mill books daily, but the macaroni trade is anything but active. Most manufacturers are still asking mills to hold back on deliveries, and mills would really welcome directions more than they would fresh bookings. Prices firm at ceilings; fancy No. 1 semolina $3.62 cwt bulk, f.o.b. Minneapolis, standard $3.52, durum flour $3.27@3.32.

In the week ended June 5, nine Minneapolis and interior mills made 163,912 sacks (cwts) durum products against 174,980 in the previous week.

Chicago: Fair demand with no general buying reported but a fair number of smaller-sized sales made. No. 1 semolina $3.75 @3.76, standard No. 1 $3.65@3.66.

St. Louis: Prices advanced 1-16c cwt. Sales and shipping directions slow; first grade semolina $3.83, granular $3.81, No. 3 $3.73, fancy patent $3.83.

Buffalo: With macaroni production down there is little buying urge. However, sales here and there indicate some buyers about ready to go forward to meet resumption of capacity production later in summer; trend steady; supply ample; No. 1 $3.98, durum fancy patent $3.98; macaroni flour $3.73, first clear $3.12, second clear $2.12; durum granular, not quoted.

Philadelphia: Market generally firm with offerings light. Little activity in trade; No. 1 fancy $4.06, No. 1 regular $3.85.

Pittsburgh: Light; trend unchanged; supply ample; per sack (cwt), No. 1 fancy $3.98, standard No. 1 $3.88.

RYE PRODUCTS

Minneapolis and Interior Minnesota: Rye grain had another substantial advance last week, but lost some of the gain the current week. Trade, however, is beginning to take a little more notice of the market, and somewhat better sales were reported. Rye is still, compared with other cereals, well below parity level, and, even at the advance, is relatively cheap. No big contracting has been done as yet, however. Pure white rye flour $2.79@2.89 per 100 lbs, in cottons, f.o.b. Minneapolis, pure medium $2.69@2.79, pure dark $2.44@2.56.

Chicago: Demand and sales continue fairly active with sales in moderate sized lots. Directions good; white patent $2.75@2.92, medium $2.65@2.82, dark $2.21@2.53.

St. Louis: Prices advanced 9-30c. Sales and shipping directions slow; pure white flour $3.19 cwt, medium $3.09, dark $2.89, rye meal $2.99.

Buffalo: Fair; trend steady; supply ample; white $3.15, medium $3.05, dark $2.85.

New York: Advancing prices preclude buyer interest; pure white patents $3.15@3.20.

Philadelphia: Market firm and higher with offerings light and demand moderate; white patent $2.95@3.10.

Pittsburgh: Slow; trend unchanged; supply ample; per sack (cwt), pure white rye flour $2.68@2.81, medium $2.65@2.68, dark $2.30@2.37.

Accommodating itself to wartime regulations, ceilings and every kind of essential restraint, this organization continues to give its milling wheat customers faithful, experienced and painstaking service.

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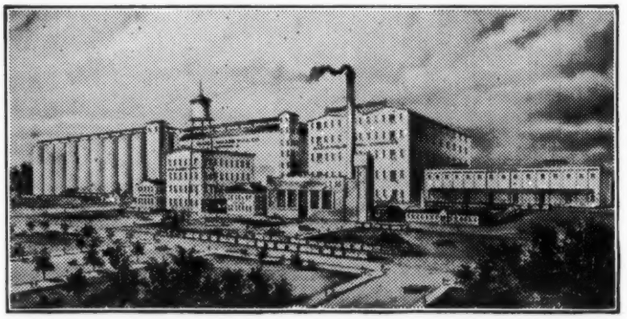

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MARKETS IN DETAIL

U. S. FLOUR MARKET

THE SOUTHWEST

Kansas City: Sales have stepped up slightly to 39% of capacity, compared with 28% the previous week and 92% a year ago for mills in the southwest.

Family business still slow, bakers not buying with much relish, and the whole tempo of the trade is still sluggish. Wheat market not moving enough to cause much excitement and no crop damage reports have been alarming enough to bring in further purchases.

Clears steady, operations light, export business fair, dependent entirely upon available space.

Quotations, June 5: established brands family flour $3.80@4, bakers short patent $3.10@3.25, 95% $3.05@3.15, straight $3@3.10, first clear $2.60@2.85, second clear $2.50@2.65, low grade $2.40@2.50.

Of the mills reporting, 1 reported domestic business active, 3 fair, 4 quiet, 5 slow and 8 dull.

Oklahoma City: Sales improved averaging 52% as compared to 11% last week, 80% of bookings to the baking trade, the balance going to family buyers. Operation declined slightly averaging 60% compared to 78% last week. Prices remain unchanged. Quotations, per sack (cwt), June 5: hard wheat short patent flour $3.65@4.35; soft wheat short patent flour $3.65@4.35, standard patent $3.55@4.15, bakers extra fancy $3.53@3.58, bakers short patent $3.45@3.51, bakers standard $3.43@3.48.

Omaha: Mills report sales ranging from 8 to 67% of capacity for the week ending June 5. Shipping directions on former sales poor. Mills operated four to seven days. Quotations firm, per sack (cwt), June 5: family fancy $3.70, family standard $3.40, baker's shorts $3.40, baker's standard $3.30.

Wichita: Sales quiet, directions 100%, quotations steady.

Hutchinson: Stagnation grips business with buyers awaiting new crop and better prices. Virtually nothing sold. Shipping directions fair to good.

Salina: Demand has been very slow with prices about 5c bbl higher. Shipping directions only fair.

Texas: Buyers as well as the mills are marking time, pending movement of the new wheat crop and establishment of values. Sales averaged no more than 20 to 25% of capacity, though running time is still around 50 to 60%. Demand for family has been especially disappointing. Prices about unchanged. Quotations, per sack (cwt), June 4: family flour 50's, extra high patent $3.80@4.20, high patent $3.55@4.20, high patent $3.55@3.95; standard bakers, 100's, 44% ash or less $3.35@3.51, first clears, 100's $2.80@3 delivered, Texas common points.

THE NORTHWEST

Minneapolis: Demand continues dull and spotted. A few mills report a slight improvement in inquiry from bakers, but the majority declare dull spell is unbroken. Family flour trade seems to have faded from the picture entirely. And, as usual, when market becomes quiet, costs are forgotten and profits disappear. More complaint is heard of concerning going prices than for some time past.

If anything, there is some improvement in the matter of shipping directions. They are not as scarce as they were, and production seems to be picking up a little.

Sales by spring wheat mills for the week ending June 5 were around 42% of capacity, against 48% the preceding week, and 90% a year ago.

Quotations per sack (cwt) June 8: established brands short patents $3.44, spring first patent $3.37@3.39, standard patent $3.27@3.32, fancy clear $3.27@3.31, first clear $3.10@3.15, second clear $2.55@2.65, whole wheat $3.30@3.35.

Interior Mills, including Duluth: Another dull, uninteresting week. Very few buyers display any interest whatever in future requirements, and are still slow about furnishing directions against old purchases. Under the circumstances, millfeed production continues light, with demand heavy and prices firm at ceilings.

THE CENTRAL WEST

Chicago: Improved demand continues. Bakers are inquiring quite freely and a fair number of sales have been made. These range from one and two car lots up to 1,000, 2,000 and 3,000 bbls. Mill agents expect this improved buying to continue for a week or two as many bakers are in need of flour. Shipping directions fair to good. No change in family situation, business continues negligible with deliveries light. Quotations, June 5: spring top $3.39@3.59, standard patent $3.29@3.50, first clear $3.19@3.43, second clear $2, family flour $4.40@4.47; hard winter short patent $3.34@3.50, 95% patent $3.25@3.45, first clear $2.86@3.06; soft winter short patent $3.57@4.53, standard patent $3.47@4.28, first clear $3.16@3.57.

St. Louis: Sales limited to car lot orders to bakers. No interest shown by the large bakers. Mills report new business as exceptionally slow. No demand for hard or soft wheat clears. Prices steady. Jobbers advise situation unchanged from past weeks, only buying being for immediate wants. Shipping directions improved. Quotations, per sack (cwt), June 5: soft wheat baker straight and patent (ceiling price) $3.98 per cwt, cake flour $4.56, family soft wheat short patent $3.98@4.29, straight $3.98@4.29, first clear $3.06@3.32; hard wheat baker patent (ceiling price) $3.44, family short patent $3.57@3.83, straight and 95% $3.44@3.49, first clear $2.68@3.06; spring wheat baker patent, straight and 95% $3.44.

Toledo: Sales very slow. Hardly reasonable to expect anything else in consequence of large volume of sales and production heretofore for domestic consumption unless there were continued large purchases by lend-lease operations. Reduced sales and directions not coming any too fast are now finding reflection in smaller output with many of the mills.

The Toledo bid for No. 2 red wheat, 27c rate points to New York, June 4, was $1.63, or 17c over the close of Chicago July, and bid has hovered right around that level for long time. No quotations and prices on flour available. Flour and feed at ceiling levels.

EASTERN STATES

Buffalo: While there was no general interest, buyers who were in the market placing orders simply to round out stocks, the trade viewed the picture as brighter. Some of the trade has booked round lots in apparent anticipation of a higher loan rate and a wider wheat storage which was interpreted as a trend toward possible higher prices. Shipping directions continue slow and hesitant. The baking branch of the trade continues to place the most orders while the family trade is at a very low ebb. Foreign trade routine.

Quotations, per sack (cwt), June 5: spring short patent $3.80, spring standard patent $3.70@3.75, spring high gluten $3.79, top family patent $4.63, first clear $3.39, southwestern short patent $3.75; pastry $3.85.

New York: Market devoid of anything but small-lot business. Buyers amply stocked and can take on no more flour even though it is offered at bargain levels. Prices, generally, hold unchanged to somewhat higher, with only occasional reductions where mills are anxious to sell for immediate shipment, but both the large and small baking trade is currently disinterested. Shipping directions fair, which means eventual replacements but there is no feature to the local market.

Quotations, per sack (cwt), June 5: spring high glutens $3.82@3.85, standard patents $3.50@3.70, clears $3.42@3.60; southwestern high glutens $3.60@3.68, standard patents $3.50@3.65; soft winter straights $3.65@3.80.

Boston: Signs of future buying activity began to show themselves although it was not reflected in current commitments. As buyers ate further into their present supplies they were giving some attention to the market knowing they will soon have to put new commitments on the books. Mill agents believe that a fair amount of business should develop within the month and any strong market news should start the ball rolling. So far as actual commitments are concerned they are hardly more numerous than in preceding dull weeks and minimum car lots prevailed although a 1,000-bbl order for southwestern patent reported. Other than that there was no particular preference for any one type of flour. Family sales just do not exist with stocks still lying on dealers' shelves. Flour on old contracts ordered out steadily but not on a heavy scale. Market shows a firm tone but mill quotations unchanged. Quotations, per sack (cwt), June 5: spring high gluten $3.88@3.98, short patent $3.73@3.88, standard patent $3.63@3.73, first clear $3.52@3.62; southwestern short patent $3.58@3.73, standard patent $3.48@3.58; Texas short patent $3.68@3.78, standard patent $3.53@3.68; soft winter patents $3.96@4.06, straights $3.73@3.83 and clears $3.53@3.63.

Philadelphia: Little change in the general situation. Prices generally firmly maintained, but demand extremely limited. Jobbers and bakers apparently pretty well supplied for near wants and show little disposition to operate ahead. Business in most quarters reported as poor and sales confined to small lots for fill-in purposes. Quotations, per sack (cwt), June 5: spring wheat short patent $3.80@3.90, standard patent $3.60@3.70, first spring clear $3.50@3.56; hard winter short patent $3.70@3.80, 95% $3.50@3.60; soft winter straights, nominal.

Pittsburgh: Demand held to small lots of spring wheat and hard winters. Market sluggish and unsettled with shipping direction materially improved. Stocks of bakers reported to be dwindling and indications are that some good-sized buying is in the offing. Family flour demand slow. Jobbers and some bakers taking on small lots to replenish stocks. Prices adhere closely to ceiling. Soft winter sales have improved due to increased demand for sweet goods, especially on part of retail bakers. Clears lack demand and supply is limited. Quotations, per sack (cwt), June 5: spring wheat, short patent $3.75@3.80, straight $3.67@3.68, first spring clear $3.44@3.56; hard winter short patent $3.67@3.80, straight grade $3.50@3.59, high gluten $3.64@3.80, first clear $3.18@3.49; soft winter bakers short patent $4.51@4.64; straight grade $3.44@3.52.

THE SOUTH

New Orleans: Very little doing in the local market. A few inquiries are coming out on a stronger wheat market, but few sales are actually consummated. Southwestern hard wheat flours in best demand. Pacific Coast and midwestern flours quiet. Shipping directions show signs of improvement but still lag. Bread and cake production good to normal, likewise cracker and macaroni production.

Quotations, per sack (cwt), June 5: hard spring wheat (f.o.b. Minneapolis), family patent $3.45@3.60, first patent $3.30@3.45, standard patent $3.20@3.30, fancy clear $3.15@3.20, first clear $3.05@3.15, second clear $2.75@3; hard winter wheat family patent $3.50@3.60, bakers' short patent $3.35@3.45, 95% protein $3.25@3.35, first clear $3.10@3.20, second clear $2.90@3.05, soft wheat short patent $4.05@4.35, straight $3.45@3.75, first clear $3@3.30.

Atlanta: Demand continues light, with shipping directions slow, and scattered sales. Bakers holding off in anticipation of new wheat crop, although one baker purchased a sizeable quantity of flour. No change in family flour business, which continues extremely quiet, with wholesale grocers and jobbers being heavily stocked and little movement into consuming circles of stocks at retail stores. After showing a little increased interest the previous week, blenders have fallen back into the apathy of past several weeks. Prices up a few cents, first noticeable change in some time.

Quotations, per sack (cwt), June 5: spring wheat bakers short patent $3.90@3.95, standard patent $3.79@3.85, straight $3.67@3.69, first bakers clear $3.42@3.56, nominal; hard winter bakers short patent $3.61@3.75, standard patent $3.50@3.66, straight $3.50@3.60, family short patent $3.86@4.07, fancy patent $3.64, special patent $3.73, low protein 95% $3.46@3.50, from the coast $3.50 bulk; soft wheat 95% $3.83@3.87, straight $3.79@3.85, fancy cut-off $3.45@3.50, short patent $3.99@4.08, first clear $3.38, nominal; soft wheat family short patent $4.44@4.68, fancy patent $4.35@4.47, special patent $4.20@4.32; soft wheat 95%, from the coast $3.75, bulk.

PACIFIC COAST

Seattle: Government buying dominated the wheat market, late this week, offers asked for upward to 350,000 bbls for lend-lease and 100,000 for Navy requirements. Both terminal and interior mills have submitted offers. This business comes at an opportune time as mill operations sharply curtailed for lack of business with some interior mills down altogether. Local and domestic export business remains very quiet, buyers not showing much interest and mills find it hard to quote under ceilings due to advance in local wheat prices. Quotations, f.o.b. Seattle or Tacoma, per sack (cwt), June 5: family patent $3.98.

Portland: Little if any improvement in the milling business in the Pacific Northwest. The government has taken some more flour, with the usual terms of delivery and reserving the millfeed. This latter fact is hitting the feed trade hard. The usual government specifications on the flour were provided, with mills submitting due to the lack of business in this territory. Other than that, milling business continues very quiet. Some domestic bookings, but not in a broad way.

Quotations, per sack (cwt), June 5: hard

GRAIN FUTURES—CLOSING PRICES

Closing prices of grain futures at leading option markets, in cents per bushel:

WHEAT

	Minneapolis		Chicago		Kansas City		St. Louis		Duluth	
	July	Sept.	July	Sept.	July	Sept.	July	Sept.	July	Sept.
June 2	136⅜	137	144⅝	143⅞	135⅜	136⅜	....	....	138⅝	138¼
June 3	137½	137½	144⅝	144½	136	137	....	....	139¼	139½
June 4	139	139¼	145⅜	145⅝	136⅝	137⅜	....	....	140⅜	140⅛
June 5	138½	138⅝	145⅜	145½	136½	137½	....	....	140¼	140
June 7	137⅞	138	144⅞	144⅞	135⅝	136⅜	....	....	139½	139½
June 8	138¼	138⅜	144⅞	145	135⅝	136⅝	....	....	140	139⅞

	Portland		Seattle		Winnipeg		Liverpool		Buenos Aires	
	July	Sept.	July	Sept.	July	Oct.	Closed		Closed	
June 2	....	....	128	....	100	101	....	....	....	....
June 3	....	....	129	....	100½	101⅝	....	....	....	....
June 4	....	....	130	....	101	102⅛	....	....	....	....
June 5	....	....	130	....	100½	101½	....	....	....	....
June 7	....	....	....	....	101	102	....	....	....	....
June 8	....	....	....	....	101⅜	102⅜	....	....	....	....

CORN — OATS

	Minneapolis		Chicago		Kansas City		Chicago		Minneapolis	
	July	Sept	July	Sept.	July	Sept.	July	Sept.	July	Sept.
June 2	101	....	105	105	102	102	63⅜	62⅜	59⅞	58¼
June 3	101	....	105	105	102	102	64⅝	62⅞	59⅞	58½
June 4	101	....	105	105	102	102	64⅜	63¼	60⅞	59¼
June 5	101	....	105	105	102	102	64½	63¼	60⅝	58⅞
June 7	101	....	105	105	102	102	64⅞	63¼	60⅞	59
June 8	101	....	105	105	102	102	65⅜	63½	61⅞	59⅞

RYE — FLAXSEED — BARLEY

	Chicago		Minneapolis		Minneapolis		Duluth		Minneapolis	
	July	Sept.	July	Sept.	July	Sept.	July	Sept.	July	Sept.
June 2	95½	97¼	89⅞	91⅜	305	301½	305	....	84½	....
June 3	97	98⅞	91½	93	305	302	305	....	87	....
June 4	96½	98⅜	91⅜	92¾	305	302	305	....	87	....
June 5	95⅞	97½	91	92⅛	305	302	305	....	89	....
June 7	95⅝	97¼	89⅞	91¼	305	301¼	305	....	89	....
June 8	95¾	97⅝	90½	91⅞	305	301½	305	....	89	....

A SUMMARY OF FLOUR QUOTATIONS IN LEADING MARKETS

Week-end flour quotations, per sack (cwt), packed in 100 lbs. (Canadian quotations per bbl of 196 lbs). All quotations on basis of carload lots, prompt delivery.

	Chicago	Minneapolis	Kansas City	St. Louis	Buffalo	New York	Baltimore	Philadelphia	Boston	Cincinnati	†Nashville
Spring first patent	$3.39@ 3.59	$3.37@ 3.39	$....@....	$....@ 3.44	$....@ 3.80	$3.82@ 3.85	$....@....	$3.80@ 3.90	$3.73@ 3.88	$....@....	$....@....
Spring standard patent	3.29@ 3.50	3.27@ 3.32	....@....	....@....	3.70@ 3.75	3.50@ 3.70	....@....	3.60@ 3.70	3.63@ 3.73	....@....	....@....
Spring first clear	3.19@ 3.43	3.10@ 3.15	....@....	....@....	....@ 3.39	3.42@ 3.60	....@....	3.50@ 3.56	3.52@ 3.62	....@....	....@....
Hard winter short patent	3.34@ 3.50	....@....	3.10@ 3.25	....@ 3.44	....@ 3.75	3.60@ 3.68	....@....	3.70@ 3.80	3.58@ 3.73	....@....	3.88@ 4.03
Hard winter 95% patent	3.25@ 3.45	....@....	3.05@ 3.15	3.44@ 3.49	....@....	3.50@ 3.65	....@....	3.50@ 3.60	3.48@ 3.58	....@....	....@....
Hard winter first clear	2.86@ 3.06	....@....	2.60@ 2.85	2.68@ 3.06	....@....	....@....	....@....	....@....	....@....	....@....	....@....
Soft winter short patent	3.57@ 4.53	....@....	....@....	....@ 3.98	....@....	....@....	....@....	....@....	3.96@ 4.06	....@....	4.44@ 4.69
Soft winter straight	3.47@ 4.28	....@....	....@....	3.98@ 4.29	....@....	3.65@ 3.80	*....@....	*....@....	3.73@ 3.83	....@....	4.13@ 4.29
Soft winter first clear	3.16@ 3.57	....@....	....@....	3.06@ 3.32	....@....	....@....	....@....	....@....	3.53@ 3.63	....@....	3.99@ 4.13
Rye flour, white	2.75@ 2.92	2.79@ 2.89	....@....	....@ 3.19	....@ 3.15	3.15@ 3.20	....@....	2.95@ 3.10	....@....	....@....	....@....
Rye flour, dark	2.21@ 2.53	2.44@ 2.56	....@....	....@ 2.89	....@ 2.85	....@....	....@....	....@....	....@....	....@....	....@....

	Seattle (98's)	S. Francisco	Standard patent—	Seattle	San Francisco
Family patent	$....@3.98	$....@....			

	Toronto	**Winnipeg
Spring top patent¶	$....@5.35	$....@5.30
Spring second pat.¶	....@4.70	....@4.80
Spring first clear¶	....@3.60	....@....

	Toronto	**Winnipeg
Spring exports§	.....35s 3d	....
Ontario 90% patents‡	$5.30	....

*Includes near-by straights. †Nashville prices basis f.o.b. Ohio River points for soft winter wheat flour. **In cottons, Fort William basis. ‡Second-hand jutes. ¶98-lb cottons. §280-lb cottons.

winters $3.47, soft wheat straight $3.03, bluestem topping $3.23, high gluten $3.45, cake $3.90, pie $2.98, fancy hard wheat clears $3.10, whole wheat, 100% $3.33, graham $3.03, cracked wheat $3.13.

CANADIAN MARKETS

Toronto-Montreal: Spring wheat flour trade in the domestic market shows no change. Demand is normal and so far millers have been supplying all needs notwithstanding the difficulties of production and delivery caused by scarcity of labor and the pressure of export war orders. The inroads of conscription on milling company staffs are alarming in view of the necessity of flour production both for civilian use and for export to the armed forces. Some Ontario mills have consequently been obliged to reduce operating time. Prices are at ceiling levels and are unchanged. Quotations, June 5: top patents $5.35 bbl, seconds $4.70, bakers $4.40, in 98's, cotton, net cash, car lots, Toronto-Montreal freights.

No new export orders from the United Kingdom were booked by Canadian mills during the week. It is doubtful if any could take on any more. They are fully booked up until end of August. Canadian mills are trying to get all outstanding West Indies business cleaned up before July 1 when standardization of brands and grades becomes effective in that market. Newfoundland buyers are fully covered and no new business was done there. The asking price is unchanged. Quotations, June 5: government regulation grade of Canadian flour 35s 3d per 280 lbs, cotton, June-July-August. Canadian winter sports.

Ontario winter wheat flour sales are light. With Manitoba's so much cheaper it is hard to find buyers. Export business is dead and the price has dropped 15c since a week ago. Domestic values show little change. Quotations, June 5: $5.30 bbl, in secondhand jute bags, Montreal freight basis, $5.40 in secondhand cottons, $5 bbl, bulk, in buyers' bags, seaboard, for export.

Supplies of winter wheat are scarce and demand also is limited. Farmers are busy with spring work and are not delivering. The price continues at the ceiling level (June 5): $1.10@1.11, f.o.b., shipping points.

Winnipeg: Very minor export sales with United Kingdom the buyer. Domestic trade moderate. Mills were showing better interest in cash wheat market and took some round lots of northern grades. Mills operating to capacity on export orders. Quotations, June 5: top patent springs for delivery between Ft. William and the British Columbia boundary $5.30, cottons; seconds $4.80, second patents to bakers $4.60.

Vancouver: Hard wheat flour prices steady with supplies good. Quotations on a cash car basis in cotton 98's remain at ceiling levels, $5.40 for first patents, $5 for bakers patents and $4.90 for Vitamin B. Ontario soft wheat flour supplies are coming in fairly well and prospects of new crop grindings by the end of August are fair. While the soft wheat flour harvest is not expected to be as large this year, it is expected to be of better quality. Demand for soft wheat flour here remains good despite the higher price in comparison with hard wheat grinds. Quotations to the trade are steady around $7.50.

MILLFEED MARKETS

Quotations, Tuesday, June 8.

Minneapolis: Trade is awaiting definite word as to when the additional 50,000,000 bus of feed wheat, sold by the CCC under an amendment to the lend-lease bill, will be released. In the absence of millfeed offerings, buyers are clamoring for ground wheat, offerings of which were shut off over a week ago. Occasionally, a mill has a car of millfeed to sell, but much more than a dozen buyers in sight for it. So, temporarily, millfeed is not mentioned, with quotations held firm at the ceiling, for any shipment.

Oklahoma City: Excellent demand with scant supplies. Quotation basis burlap bags, carload shipment, delivered southern points: bran, millrun, shorts $1.90@1.95 bag of 100 lbs; northern deliveries: bran, millrun, shorts $1.85@1.90.

Omaha: No change in the situation. Demand urgent and supply very limited. Prices on all mill feeds still at ceiling $36.50.

Ft. Worth: Unsatisfied; trend tight at mixed car ceilings; supply inadequate. Practically no current offerings; wheat bran $43.40, gray shorts $43.40, in mixed cars, delivered Texas common points.

Chicago: Good; trend strong; no offerings; spring and hard winter bran $40.40, std. midds. $40.40, flour midds. $40.40, red dog $40.40, jobber's ceiling price.

St. Louis: Bran, pure bran, gray shorts and brown shorts $39@39.50, red dog $39.50.

Toledo: Nothing new to say—same old story. All millfeed in sharp and continued demand at ceiling levels, and output being now reduced by decline in milling operations. No trouble selling all that can be produced and much more.

Buffalo: With output still down, although slightly improved over the previous week, demand far exceeded supply; trend steady; supply very light; bran, flour midds., red dog, second clear, heavy mixed feeds and std. midds. $42.05.

New York: Heavy; trend unchanged; none available; nominal price $46.06.

Boston: Demand for nearby needs remains strong but sellers helpless to do anything about it since supplies in any substantial quantities cannot be found either in domestic or Canadian sources. Mill prices for deferred shipment remain at ceilings but buyers too concerned with the problem of present requirements to worry about the future. Spring bran, midds., mixed feed, red dog $46.48.

Philadelphia: Moderate; trend firm; supply limited; bran, standard and pure spring $45.65 bid, hard winter $45.65, soft winter, nominal; midds. std. flour and red dog $45.65.

Pittsburgh: Brisk; trend unchanged, offerings light; supply scarce and limited; spring bran and red dog $44.35@44.85, nominal.

Atlanta: Demand continues strong with offerings still light; scarcity of many ingredients causing some feed mills to close, with others operating part time; manufacturers and dealers buying almost anything with feed value to ease situation; no current offerings on gluten feed and meal; hominy feed in good request, with prices advancing around $1 ton; brewers and distillers' grains firm, with active inquiry mostly from mixed feed manufacturers; offerings of beet pulp, citrus pulp and rice bran continued unavailable from manufacturers; bran, gray shorts and midds. $46.50 @47.

Seattle: Good; trend strong; supply limited; $36.50 ceiling.

Portland: Millrun, bran, shorts, midds. $36.50 ton.

Ogden: A tight situation continues to exist in the Rocky mountain area, with demand considerably exceeding supply. Mills are operating to 60% of capacity six days per week, and flour fills the warehouses. Prices continue at ceiling.

Quotations (stationary), (ceiling): red bran and millrun, blended, white, midds., carload lots, f.o.b. Ogden $36.50. Denver prices: red bran and millrun, blended, white, midds. $41.10 per ton, ceiling. California prices (at ceiling): red bran and millrun, blended, white $41.10, midds. $42.10, car lots, f.o.b. San Francisco, with Los Angeles up $1, ceiling.

Los Angeles: Fair; trend steady; supply scarce; Kansas bran $42.60, local mill run $42.60.

Toronto-Montreal: Demand for millfeed seems as keen as ever although pasture is now in the picture. The quantity of millfeed being produced by Canadian mills is away above normal but is finding a ready sale in home markets. For this reason and owing to the scarcity of permits exports are extremely light. Permits are worth $13@13.50 ton on account of the high export prices. Quotations, domestic ceiling, June 5: bran $29, shorts $30, midds. $33 ton, net cash, bags included, mixed or straight cars, Montreal basis; export $45.50 ton (Boston ceiling), Montreal freights, Canadian funds.

Winnipeg: All supplies in keen demand and moving to eastern Canada. Feeding interests could take larger amounts if available. No indication that bran will be used in mixing of grasshopper poison bait. Quotations, June 5: bran $28, shorts $29, Man. & Sask.; Alberta bran $25.50, shorts $26.50, small lots ex-country elevators and warehouses $3 extra.

Vancouver: Trend steady. There has been no change in the price situation for some time with quotations holding at ceiling levels. Domestic demand remains good, partly due to the late cold spring and increase in poultry and stock production. Supplies are ample for current needs and replacements are coming in well. Quotations on a cash car basis are $29.80 for bran, $30.80 for shorts and $33.80 for midds., with no prices or dealings in feed flour.

SUMMARY OF MILLFEED QUOTATIONS

Week-end millfeed quotations, summarized from the market reviews, are based on carload lots, prompt delivery, per ton, packed in 100-lb sacks, f.o.b. at indicated points:

	Chicago	‡Minneapolis	Kansas City	St. Louis	Buffalo
Spring bran	$....@40.40	$....@37.75	$....@....	$....@....	$....@42.05
Hard winter bran	....@40.40	....@....	....@37.00	39.00@39.50	....@....
Soft winter bran	....@....	....@....	....@....	....@....	....@....
Stand. middlings*	....@40.40	....@37.75	....@....	39.00@39.50	....@42.05
Flour middlings†	....@40.40	....@37.75	....@37.00	39.00@39.50	....@42.05
Red dog	....@40.40	....@37.75	....@....	....@39.50	....@42.05

	Baltimore	Philadelphia	Boston	Cincinnati	Nashville
Spring bran	$....@....	$....@45.65	$....@46.48	$....@....	$....@....
Hard winter bran	....@....	....@45.65	....@....	....@....	....@....
Soft winter bran	....@....	....@....	....@....	....@....	....@43.30
Stand. middlings*	....@....	....@45.65	....@46.48	....@....	....@....
Flour middlings†	....@....	....@45.65	....@46.48	....@....	....@43.30
Red dog	....@....	....@45.65	....@46.48	....@....	....@....

	Spring bran	Shorts	Middlings
Toronto	$....@29.00	$....@30.00	$....@33.00
¶Winnipeg	....@28.00	....@29.00	....@....

*Brown shorts. †Gray shorts. ¶Fort William basis. ‡Tuesday prices.

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Line country houses in five states
Terminal houses at Kansas City and St. Joseph
Kansas City, Mo.

Milling for the Duration

(Continued from page 19.)

the end of June this year there will have been consumed for alcohol purposes a total of close to 70,000,000 bus of wheat.

The feed wheat program as a means of alleviating the shortage started in with the release of 125,000,000 bus for this purpose at a price with relation to corn, and an additional 100,000,000 bus was added to this when the first allocation was used up. This has developed with rather amazing speed, and the flow of government grain into feeding channels has been astounding, not only to the government, but to the grain trade as well.

Substantial purchases of flour for lend-lease have added additional opportunities for activity, and while criticism may be easily directed toward some of the things being done in connection with lend-lease operations, on the whole it is another place where our industry has an opportunity of doing something concrete in connection with the war effort.

PAPER WORK AND MANPOWER

The amount of paper work involved in operating an industry under present conditions is noteworthy in itself. Whether or not it is necessary I will leave to each of you to judge. Manpower, for you in charge of production, has rapidly developed into a major headache. Fortunately, the War Manpower Commission has recognized the essential character of milling. Some of the regulations have promised much and produced little. Many of us are facing excessive overtime, short crews, and in some instances actual loss of operating time on account of labor. The milling industry, with wage scales usually above the average in the communities in which we operate, has escaped much of the difficulty experienced by those industries which depended on more modest wage scales under normal conditions. Add to this those of our industry who are in military service, and we have a real reason for labor troubles.

THERE MAY BE A SHORTAGE

For the balance of the war we need to resurvey our situation as millers and consider the probability that that which we called a burdensome surplus of wheat, beginning about 1926 and carrying on up to date, may in actuality be a shortage. Most milling groups in their relations with the government have insisted that the government consider every bushel of wheat highly important and have urged the utmost conservation of this valued food for later need.

The War Food Administration says that while the usually accepted estimated use of cereals is equal to 20% of our caloric intake, rationing of other foods may step up this requirement to 24 or 25%, or an increase of in the neighborhood of 25,000,000 bbls of flour. The per capita consumption of flour in 1910 was 211 lbs; in 1935 it was 154 lbs, so the 25% increase in the consumption is not at all unreasonable. The opportunity is there for the industry. It is up to the industry how well we take advantage of it.

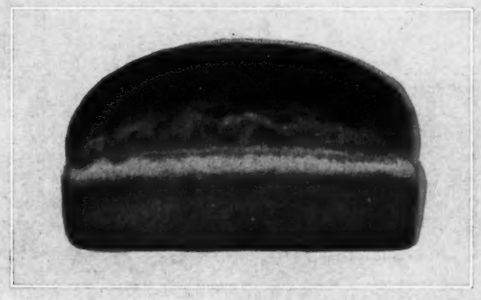
POSTWAR PREPARATIONS

It has been said that the most dangerous period in the history of the war will be the first 48 hours after the war ceases. One might easily question that, but not that the most dangerous period may easily be the first 30 days. Postwar preparation will be helpful in one respect—it will permit a stepdown in strictly war production, and not the instant chopping off that would be the result of simultaneous cessation of hostilities in all sections. We as millers will then be faced with the problem of getting our feet back on the ground, to readjust some of the wasteful practices that are incident to the war type of production and which will be all important if we are to avoid the nasty shock which our industry received at the end of the previous war.

Reconversion in the milling industry is not going to be the problem that it is in many other industries, but any thinking that our industry, due to the demand in world markets for foodstuffs, can escape the general rebuilding that will be necessary to industry generally is merely wishful thinking of a dangerous character.

The amount of potential demand for flour at the end of the war staggers the imagination. There will be released peoples who have not seen white bread since hostilities started; there will be peoples who have not had a full meal for most of that period, peoples which we of the United Nations have promised to take care of. Lend-lease or something of that nature will have a tremendous task ahead, and the organization is already being set up. International trade will depend on that 48 hours after peace. It is to be hoped that a peace can be established that will permit international trade on a much more equitable basis than has been possible in recent years, and given reasonable opportunity, the milling industry, long experienced in world trade, will undoubtedly do its

Be Proud of Your Job,
As We are of Ours...
for



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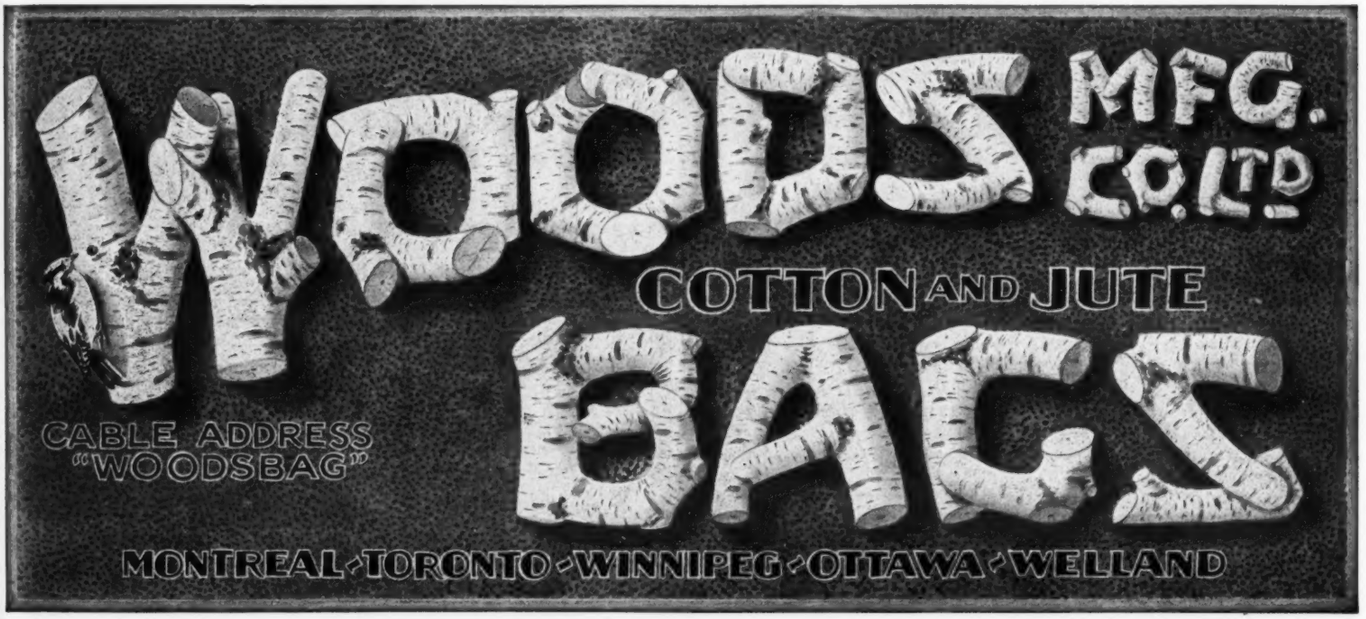

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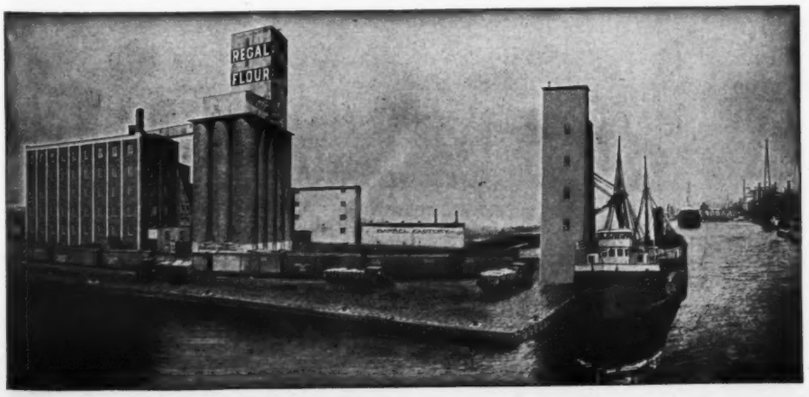

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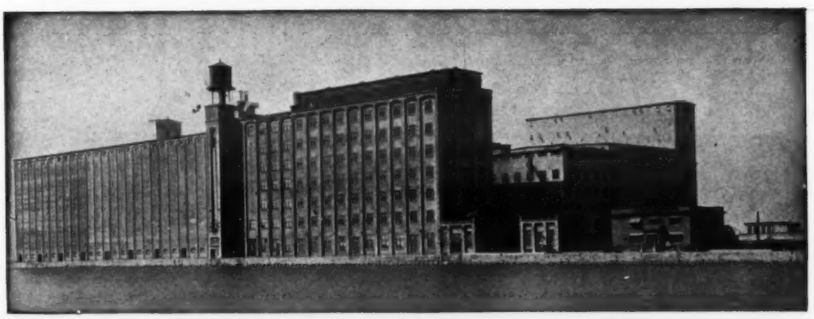

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share in spreading American trade throughout the world.

One thing we must look for in our domestic market is the possibility of reaction in the wake of forced consumption of cereals due to scarcity of other foods. We have an excellent product. To the extent that we increase the per capita consumption due to inability to obtain other foods, to that extent we will have to fight the harder to maintain our normal share in the nation's food picture when these other foods are again available.

THE BRANNY CRACKPOT

It has been too often said that milling has been dormant. You and I know that is not so, but how closely have we followed the more advanced thinking in nutritional progress, in streamlining food products, and in attaining the utmost from the materials with which we work? For many years—for generations—you have had the antagonism of a certain type of nutritional leader who has contended that in the milling of white flour you have robbed the wheat berry of much of its nutritive value. Even today that thinking is rather considerable within certain branches of the government.

Due to the rapid progress in vitamin knowledge much of that handicap, however, has been overcome. While some nutritionists still deride the milling and baking industries for not forcing the public to eat a whole wheat loaf, the more enlightened nutritionists in the government agencies have recognized the large part which individual preferences must play in any food program. They are beginning to realize that a pure white flour of the finest parts of the wheat berry was developed not because some miller thought that was easier to make—that it could be more cheaply manufactured — or because of some strange and unknown ability thus to reap additional and unjust rewards—but rather because that was the product which the consumer preferred and was willing to pay for.

Admitting that we are probably taking only the first few steps in the knowledge of vitamins, we in the milling industry should be properly grateful to this development in that it has placed on the side of the miller and the consumer those governmental agencies who are most concerned with a balanced diet and a national diet with sufficient of the various vitamins to fill the human need.

That you milling engineers—production experts in milling—are fully capable of meeting any needs for different foods or different products is easily reflected in the handling of the alcohol meal program, in the work on certain types of starches from wheat and other grains, and in the milling program to hold natural vitamins in the wheat berry in addition to the synthetic vitamins. When we see the things that have been done with other foods, we realize how short a distance we have come in the processing and distribution of the wheat berry in its various parts and the tremendous future which we have before us in that respect.

Many of us have had our headaches with respect to carrying on, doing a larger job with increased responsibility, and with many of our younger men in the armed services. I can build any mill that you may want under normal conditions in six months. Steel and concrete do not make an organization. Our job has been to keep these organizations intact, to make them a going concern, so that these boys when they come back will have an opportunity again to fit themselves into the normal scheme of life, pick up where they left off, and carry on. It is up to you and to me to build our organizations to that end, and to the extent that we are successful our companies will be successful, and the industry will be successful.

Our markets, our products and our organization are not postwar planning, but rather, postwar preparation. As we prepare today so will we accomplish tomorrow. Working under controls, the like of which we could not have visualized a few years ago, we can remember that there are no ceilings on intelligence —there is no rationing of constructive thinking—there are no priorities on initiative. As we prepare today so will we proceed tomorrow.

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The Bemis Bro. Bag Co.'s plant at St. Louis, Mo., made the remarkable record of operating 1,192,912 man-hours in 1942 without a single lost-time accident. For this extraordinary achievement, the St. Louis Safety Council recently presented to the company a handsome bronze plaque. N. S. Smith, superintendent, is an accident-prevention enthusiast and it was under his method of supervision that the Bemis plant accomplished its safety record. No less than six safety awards have been won by Bemis in past years in competition with other St. Louis industries.

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WHAT'S THE GOOD?

"Whenever I look at you," said the young man to his girl, "I think of those marvelous glamour girls you see in the pictures."

"Do you really?" asked his girl, highly gratified.

"Yes, but what's the good? A guy like me has to be satisfied with what he can get?"

COULD BE

"They say there are germs in kisses. What do you suppose a girl could catch that way?"

"A husband."

HIGH-PRICED

"How much will you charge to get me a divorce?"

"Two hundred dollars."

"Don't be ridiculous. I can get him shot for fifty."

WASTING TIME

Gob.—May I kiss you? May I please kiss you? Say, are you deaf?

She.—No. Are you paralyzed?—*U.S.S. Wichita Sun Dial.*

ON THE SPOT

Gob.—I guess you've gone out with worse looking fellows that I am, haven't you?

No answer.

Gob.—I say, I guess you've gone out with worse looking fellows than I am, haven't you?

Gal.—I heard you the first time. I was just trying to think.—*Anacostia Naval Air Station News.*

MAYBE SO

"I've no sympathy for a man who beats his wife," the big, red-faced man announced.

"Well," said a timid little husband, "a man who can beat his wife doesn't need sympathy."

NO TOOTS

A deaf woman entered a church with an ear trumpet. Soon after she had seated herself an usher tiptoed over and whispered, "One toot, and out you go."

ABSENT-MINDED

Doctor.—Give me some of that prepared minoaceticacidester of salicylic-acid.

Druggist.—Do you mean aspirin?

Doctor.—Yeah! I never can think of that name.

AGAIN

First Movie Star.—Well, dearie, what's new tonight?

Second Movie Star.—My husband, naturally.

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"Don't be ridiculous. I can get him shot for fifty."

WASTING TIME

Gob.—May I kiss you? May I please kiss you? Say, are you deaf?

She.—No. Are you paralyzed?—*U.S.S. Wichita Sun Dial.*

ON THE SPOT

Gob.—I guess you've gone out with worse looking fellows that I am, haven't you?

No answer.

Gob.—I say, I guess you've gone out with worse looking fellows than I am, haven't you?

Gal.—I heard you the first time. I was just trying to think.—*Anacostia Naval Air Station News.*

MAYBE SO

"I've no sympathy for a man who beats his wife," the big, red-faced man announced.

"Well," said a timid little husband, "a man who can beat his wife doesn't need sympathy."

NO TOOTS

A deaf woman entered a church with an ear trumpet. Soon after she had seated herself an usher tiptoed over and whispered, "One toot, and out you go."

ABSENT-MINDED

Doctor.—Give me some of that prepared minoaceticacidester of salicylicacid.

Druggist.—Do you mean aspirin?

Doctor.—Yeah! I never can think of that name.

AGAIN

First Movie Star.—Well, dearie, what's new tonight?

Second Movie Star.—My husband, naturally.

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Great Bread Makers
From Selected Spring Wheat

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FARM GOLD
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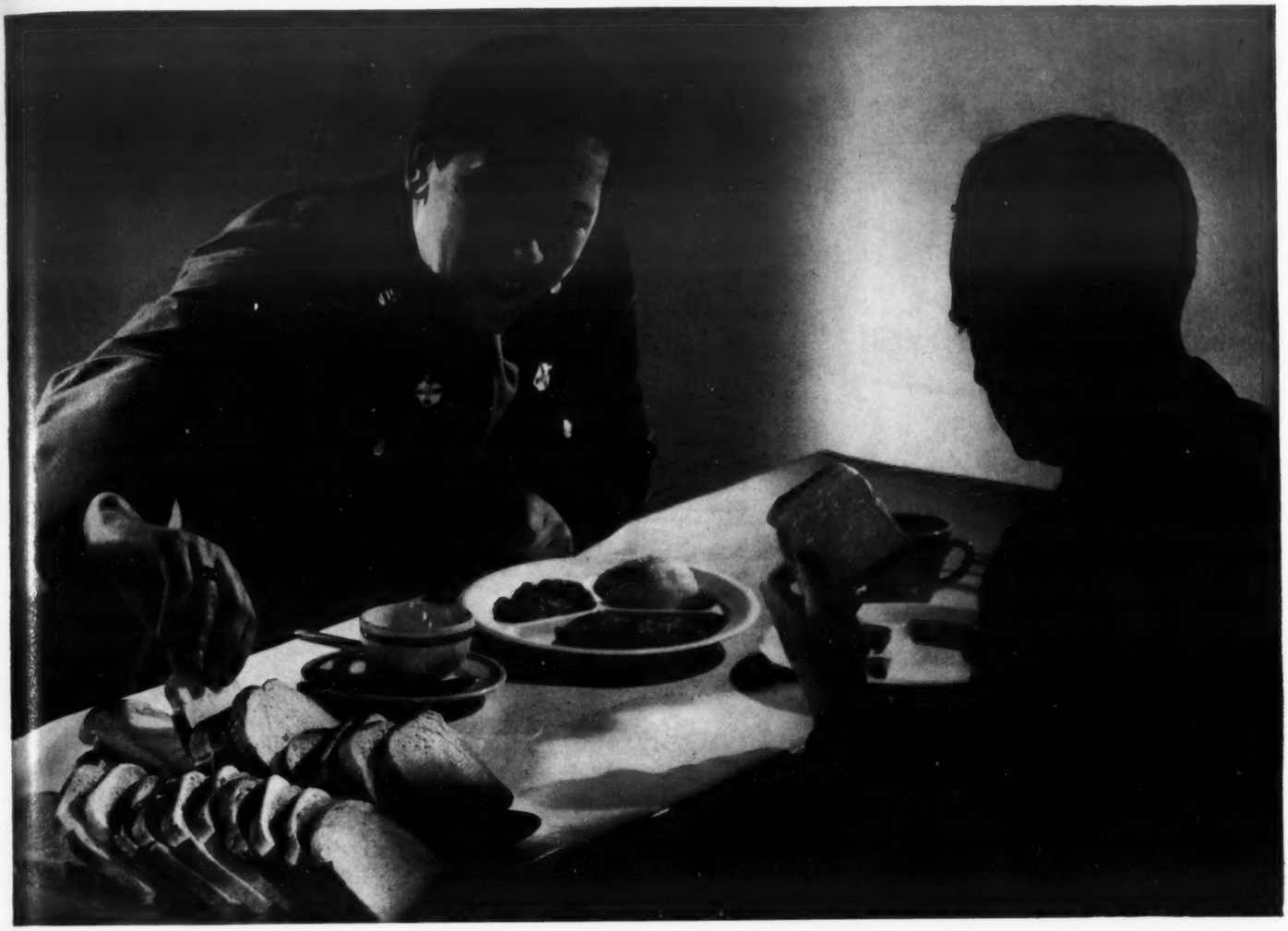

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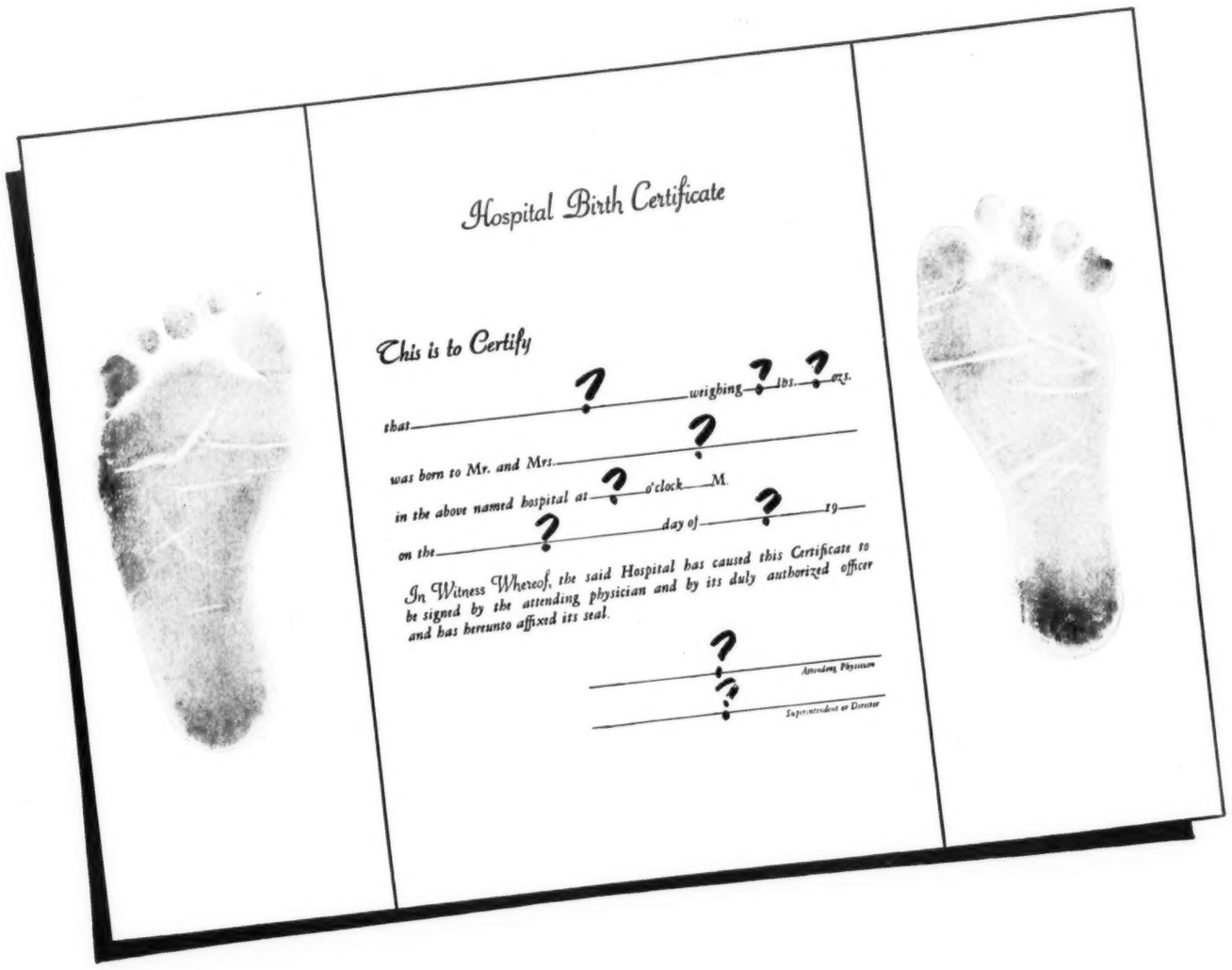
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